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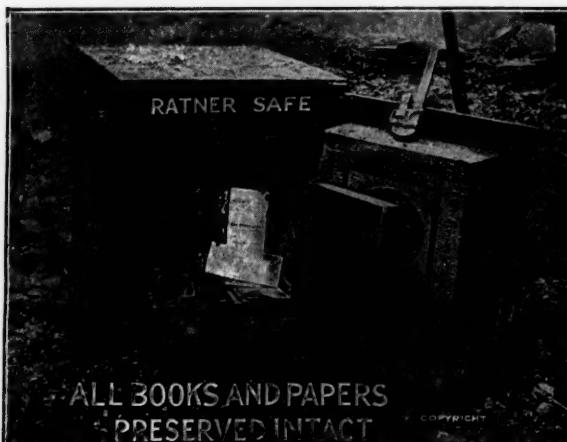


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THE JOURNAL OF THE ROYAL UNITED SERVICE INSTITUTION.

VOL. LIII.

JUNE, 1909.

No. 876.

[*Authors alone are responsible for the contents of their respective Papers.*]

SECRETARY'S NOTES.

I. ROYAL VISIT.

H.R.H. Princess Christian visited the Museum on Wednesday, 19th May.

II. OFFICERS JOINED.

The following officers joined the Institution during the month of May :—

- Captain H. T. C. Ivens, Indian Army.
Captain M. E. Dopping-Hepenstal, Indian Army.
Captain D. M. Watt, Indian Army.
Second-Lieutenant G. P. Gough, Irish Guards.
Second-Lieutenant Lord D. Fitzgerald, Irish Guards.
Colonel E. H. Armitage, R.A.
Lieutenant W. S. E. Money, Indian Army.
Lieutenant B. A. R. Blewitt, Indian Army.
Captain C. N. French, Hampshire Regiment.
Commander E. O. Gladstone, R.N.
Lieutenant F. H. L. Anstruther, Army Motor Reserve.
Captain L. W. Le M. Carey, Royal Fusiliers.
Major M. R. Parry, Hampshire Regiment.
Lieutenant W. D. B. Conran, R.E.
Lieut.-Colonel H. A. Brendon, R.F.A.
Commander R. H. Story, R.N.
Captain F. G. Marsh, Indian Army.
Captain J. L. Stenhouse, R.G.A.
Lieutenant R. G. C. Glyn, Rifle Brigade.

Lieutenant N. C. A. Moore, R.N.
 Captain G. A. S. Home, 5th Dragoon Guards.
 Major C. P. Egerton, Indian Army.
 Assistant-Paymaster A. E. Loder, R.N.R.
 Major A. G. Symonds, 4th Bn. Dorset Regiment.
 Commander J. T. Bush, R.N.
 Captain A. H. French, R.M.L.I.
 Major J. A. Wilson, Indian Army.
 Captain R. K. Walsh, Royal Scots Fusiliers.
 Captain G. C. Woodcock, R.M.A.
 Captain G. C. Norman, late Fife R.G.A. (M.)
 Captain E. T. Dixon, late R.A.
 Lieutenant D. F. Anderson, Devonshire Regiment.
 Commander R. G. A. W. Stapleton-Cotton, R.N.
 Major B. Lewis-Barned, late Kent R.G.A. (M.)
 Captain G. N. Cory, D.S.O., Royal Dublin Fusiliers.
 Lieutenant C. A. Rombulow-Pearse, R.N.
 Major S. H. Sheppard, D.S.O., R.E.
 Captain A. C. Tancock, Indian Army.
 Captain Hon. C. H. C. Guest, 1st Dragoons.
 Lieutenant R. C. Partridge, 5th Dragoon Guards.

III. EXTRA LECTURES.

Wednesday, 7th July, Vice-Admiral Sir C. Campbell, K.C.M.G., C.B., D.S.O., will lecture on "The Advantages, Strategical and Commercial, of a Battleship and Ocean-going Steamer Canal between the Forth and the Clyde," His Grace the Duke of Sutherland, K.G., in the Chair.

IV. MAP ROOM.

The collection of Naval Charts is now complete, and practically up to date. The Council desire to record how much they are indebted to the Hydrographer of the Navy for the recent additions, and also to Commander W. F. Caborne, C.B., for so kindly cataloguing the Charts.

V. PUBLICATIONS.

The following publications may now be obtained on application:—

- Library Catalogue, 2s. 6d.
- JOURNAL Index from 1887 to 1906, 1s.
- Museum Catalogue (Illustrated), 1s.
- Whitehall Palace, 1s.
- Weapons in the Museum (Illustrated), 2s. 6d.

VI. LENDING LIBRARY.

Officers who borrow books from the Library are particularly requested to return them in the boxes in which they are sent out, and also to attach their names when returning the books.

VII. CORRESPONDENCE.

All the correspondence of the Institution, including that with reference to the Library, Lectures, and the JOURNAL (with the exception of those letters for perusal by the Editor only), should be addressed to the Secretary and not to individual members of the staff by name.

VIII. REGIMENTAL COLOURS.

The Secretary is prepared to arrange for repairs to Regimental Colours and Cavalry Standards, in service or otherwise, at the Institution. The repairs are executed at as small a cost as possible. A very large number has already been received during the past five years.

IX. ADDITIONS TO THE MUSEUM.

- (969). A Proof Engraving of Sketches of the Field-Marshal Blücher, taken from life, by F. Rehberg, at St. James's Palace, 12th June, 1814.—*Given by E. C. Ball, Esq.*
- (971). A Line Engraving, "Scotland Yard, with part of the Banqueting House," dated 1777, by E. Rooker after Paul Sandby. Published by John Boydell.—*Purchased.*
- (972). A Line Engraving, "The Horse Guards," dated 1777, by E. Rooker after M. A. Rooker. Published by John Boydell.—*Purchased.*
- (979). Shako with Plume, as worn by the Officers of the 62nd Regiment, now the Wiltshire Regiment, between the years 1830 and 1846.—*Purchased.*
- (980). Helmet, as worn by the Officers of the 2nd Dragoon Guards (Queen's Bays) from 1830 to 1846.—*Purchased.*
- (982). Shoulder Belt Plates of the 27th Royal Inniskilling Fusiliers and the 25th The King's Own Scottish Borderers.
—*Given by Lieut.-Colonel A. Leetham.*
- (984). Shoulder Belt Plate, Shako Plate, Coattee Buttons, and Cap Badge of the East Kent Militia.
—*Given by Colonel Sir H. C. Perrott, Bart., C.B.*
- (6001) Dress Coattee of an Officer of the 1st Regiment of The Royal Edinburgh Volunteers, raised in October, 1794.
- (3356) Silver-gilt Trophy representing an armed fort in three tiers, with groups of figures at the four corners illustrative of victory, and handsome plaques on two of the four sides depicting the attack on Algiers; given to Admiral Viscount Exmouth, G.C.B., by the Rear-Admiral, Captains, and Commanders who served under him at the bombardment of Algiers on 27th August, 1816, when an allied fleet of 19 British ships and 6 Dutch ships, in consequence of continued piracy, attacked the forts of the town, mounting 500 guns. The eight hours' bombardment resulted in a loss to the allies of 885 killed and wounded, while that of the Algerines amounted to over 6,000.
—*Deposited by the Trustees of The Viscount Exmouth.*

(3357). Sword, with gold hilt enamelled and jewelled, presented to Admiral Viscount Exmouth by the Corporation of the City of London, as a testimony of esteem and gratitude for his victorious attack on Algiers.

—Deposited by the Trustees of The Viscount Exmouth.

(3358). Sword worn by Admiral Viscount Exmouth at the bombardment of Algiers.

—Deposited by the Trustees of The Viscount Exmouth.

SECOND PRIZE ESSAY.

Subject :—

"THE COMMAND OF THE SEA: WHAT IS IT?"

By Commander T. L. SHELFORD, R.N.

Motto :—

**"Our doubts are traitors, and make us lose the good we oft
might win by fearing to attempt."** —*Measure for Measure.*

IN writing on a subject such as "The Command of the Sea"—a subject whose nomenclature lends itself to misusage by the many, wrongfully to cover a large area utterly outside its own—it is as well to commence by defining exactly what "Command of the Sea" really means; to ascertain its component parts, and then to discuss with the aid of history the use to which Command of the Sea thus defined has or may be applied.

Command means to order; of all the various uses given to the word, the fundamental is to order; "Command of the Sea," then, is "To order the Sea." Now, man cannot order the sea; what, then, in so far as that element is concerned, can he order?

As the way by which man uses the sea is the sailing of ships upon its surface, the passing to and fro of vessels as a mode of traffic from land to land, and to ensure the correct accomplishment of this passing to and fro of vessels, they must sail in safety, it is to that that we have to look to for his ordering.

The forces of Nature are not in the hands of man; those he cannot order; he can only do his best to combat them by science, skill, and experience. The safety of his ships is in Higher Hands than his.

But the forces used against the safety of his vessels by his fellow man he can combat, and if he overcome them, then in so far as man may, he has ensured that safety, he has ordered the safe passage across the sea of his vessels.

I define, therefore, "Command of the Sea" as "The ordering of the safe passage of vessels across the sea," and to put it more tersely for the purposes of this paper, which deals with "the sea and the vessels upon its bosom," the "ordering of safe

passage." This definition I shall use, and it is as well to state clearly here that if the ordering of safe passage is disputed, it can only be obtained by force. I do not mean to say that the ordering of it in war is always the sole object of war, or that the obtaining of it ends a war; but whenever it is in dispute then is war, and it is not in dispute except in war.

It is evident that a country whose upkeep, commercial prosperity, nutriment, communications and employments are sea-borne, must for its prosperity have free and fearless access to the waters it desires to use, and that to obtain and retain that access it must have the power to support its claims. It must be able, if it is to exist, to order safe passage. Interruption of that free access can only be prevented by force, and it must be prevented, as it is the source of that country's upkeep and existence.

That force is, and must be, naval. On the other hand, a country who does not in any way depend upon such sources for its upkeep must, if it is to uphold its quarrels with the other, use force; and as it can best strike its opponent by the interruption of her free access, whether by invasion or by any other means, it must have naval force to do it. It must be able to order the safe passage of its vessels to strike its blow.

I have taken the two extreme cases to show the necessity of naval force in the ordering of safe passage. Our own country most nearly appertains to the first case of any in the world to-day.

NAVAL FORCE.

The geographical position of our island does not, as some contend, give it the "Command of the Sea," though that position most materially assists, but it does most certainly make it imperative for its safe existence to obtain the power or force to order safe passage far more than a country whose boundaries are not surrounded by water. Whereas the island boundaries are all surrounded by water, that power can only be obtained by sea fighting material—that is, naval force.

When to that island be added huge dependencies, whose defence depends on the Mother Country, that sea fighting material must be largely increased. For the naval force exists for the protection of our lines of passage, and the more numerous those lines of passage, so more increasingly difficult must of course be their defence. It is a fact that to encourage trade in far-distant lands, to ensure the quick recognition of commercial rights, to lessen the likelihood of unnecessary quarrels which only hinder trade, the showing of the national flag on board an armed vessel in those distant parts is of almost incalculable advantage. As the larger and more numerous the dependencies, so become more numerous the possible points of attack, and as it is impossible to ring the earth with adequate naval forces to defend all points, the naval force the country possesses must be able to move to the point required with

rapidity, and as ships cannot subsist without food for their propulsion, it is necessary that outlying stations must be obtained and kept to ensure rapid passage. Their position must be carefully selected geographically and strategically; the ability to move the naval force quickly and without delay is, of course, a foremost quality, and the nation who has, as "Burke" puts it, "opportunities of port" is in possession of an important and necessary factor towards obtaining the "ordering of safe passage."

These are simple reasons for the existence of a Navy; but the fleet must be adequate. Above all, it must be in a position of superiority to enable it to attack. The surest defence is the offensive; but of that more anon.

For the safe provision of a fleet, for keeping it repaired and efficient in war, it must have protected harbours of refuge, impregnable to attack.

Although the ordering of safe passage is only in dispute in war, to enable a country to obtain it in war she must be prepared in peace, and to be prepared for war is the whole aim of peace strategy. We have then amongst the component parts that go to make up the whole, mechanism whereby we can successfully obtain the ordering of safe passage in war:—

First—A Navy.

Second—Opportunities of port, combining harbours of refuge and repair.

THE NAVY AND ITS FUNCTIONS.

Personnel.

As I have said before, the naval force must be adequate. Throughout all history ever bright and never extinguished shines the bright light of the efficiency of the *personnel*. Never more clearly did it shine, never more strenuously was it sought for than in the Elizabethan days of our beginning. If we consider that in those early days it was deemed foolhardy to keep the sea in the winter months, and that yet in a case of stern necessity it was kept by an Englishman while his enemy could not; and again, when we remember the state of fear and amazement which the rapid mobilisation of Elizabeth's fleet to meet the fourth Armada threw her enemies into, we see that in the small beginnings of England's Navy the *personnel* equation was the seed of its success. In every naval war the efficiency of the *personnel* stands predominant. Without its efficiency no Navy is adequate for the purpose of its being. However efficient the strategy may be, however advantageous the position of the fleet for carrying it out, it is dependent for its success on the *personnel*, and the efficiency of the *personnel* is dependent on training and practice—above all, practice. No naval force, however large, is worth its value unless its *personnel* are so immured by practice and training as to get the utmost out of it.

The development of rapid shipbuilding, of accurate shooting, of continuous high-speed steaming, etc., in the last few years, have all gone to obtaining that efficiency. Other nations have followed and too quickly to give Great Britain time to pause. We are the acknowledged master shipbuilders of the world to-day; but others are following close upon our heels, and we are not so far ahead. Still, we start, if not ahead, at least equal and not handicapped like our predecessors in our last great naval war—a handicap which they overcame by consummate seamanship, by the personal equation; and if we are to order safe passage when next it is disputed, we must look to it that that heritage upheld by Nelson and handed down from Drake be not lost to us.

Practice makes perfect, and on practice must the efficiency of a Navy depend.

Had the Japanese practised manœuvring ships from the conning-towers before their war with Russia, the remark of a Japanese naval officer, that the round walls of a conning-tower were not conducive to facility in plotting positions on a chart, would never have been made. It is a small particular, but it is in small particulars that the value of the *personnel* is shown, and only by efficiency in all small particulars can efficiency in the whole be obtained. Nowhere so much as in the naval profession is the engine of total efficiency so dependent on the correct working of every single one of its many parts. Those who have seen a fleet manœuvring, as but one example out of many, cannot deny this.

Efficiency of the *personnel* goes to increase the striking force, to make it overwhelming, to give it dignity, to ensure respect from its enemies, if not indeed fear.

I hope I have said enough to show how essential to the Navy is the efficiency of the *personnel*. It is indeed its first essential; it is indeed imperatively necessary to a country that desires to "order safe passage."

Great Britain shares with other island States one great assistance to her *personnel*, namely, that as her shores are washed by the sea, so does it follow that large numbers of its population earn their bread upon its waters, and are bred to the sea. Apart from thus breeding the *personnel* for her Navy and reserve, it assists also in bringing more prominently before the people the ways of the sea, which is at one and the same time their universal provider, safety, and menace.

I do not purposely discuss *materiel*. It must be of course of the best. The excellence of it depends entirely on the *personnel* of the country. Its successful use is in the hands of the *personnel* of the Navy.

NAVY AND COMMERCE.

The Elizabethan era may be taken as the beginning of the realisation of the importance of oversea commerce, and of

the power wielded by the fighting strength on the seas to protect it; and it is by our commerce and for our commerce that the Navy exists. Commerce called it into being and has kept it in being ever since.

We do not go to war for sentimental reasons. I doubt if we ever did. War is the outcome of commercial quarrels; it has for its aims the forcing of commercial conditions by the sword on our antagonists, conditions which we consider necessary to commercially benefit us. We give all sorts of reasons for war, but at the bottom of them all is commerce. Whether the reason given be the retention or obtaining of a strategical position, the breaking of treaties, or what not, they come down to the bed-rock of commerce, for the simple and effective reason that commerce is our life-blood.

And as the commerce of our Empire demands for its existence free and fearless access to the waters it uses, so must we see to it that we possess that power whereby we may "order safe passage for our vessels." In our case, where our oversea routes extend to all parts of the globe, the ordering of these routes becomes a very serious and perplexing problem, one that has to be taken into account more seriously as those routes expand, and one vital to our country's well-being.

It does not mean the mere convoying of vessels using those routes, that is well nigh impossible; but it does mean the prevention of the enemy's power to molest them. The act by one belligerent of commerce destruction retaliated by the other doing likewise is not more likely to result in a decisive conclusion of the war any more than the oversea raiding expeditions undertaken in the Elizabethan days; but if one belligerent can destroy the commerce of her opponent and yet preserve her own, she has accomplished a mortal blow.

It is quite easy to imagine the tremendous amount of damage that can be done to our trade by depredations at all points made by a small force, but a retaliating depredation by us is not going to inflict like hurt.

The naval manœuvres of 1906 showed how enormous must be the damage even over a small area that can be done by an inferior force before it is crushed by a superior of overwhelming numbers. The downfall of our Empire can be procured just as surely by containing our fleet and stopping our commerce as by the invasion and occupation of our islands.

How these trade routes are to be protected does not enter here, beyond the fact that the policy must be offensive; there is, and must be, large diversity of opinion, but whatever method adopted, whatever policy planned, there can surely be no diversity of opinion that to ensure success a large fleet is indispensable — nay, more, an overwhelming fleet. For if we admit, as admit we must, that commerce, whilst ensuring the life of this realm of ours, is also in time of war a most vulnerable spot, and hence to be protected, we must not at the same time forget that it is not the only vulnerable spot, that its

protection is not the only duty of the fleet, and therefore our fleet must be adequate, and to be adequate must be overwhelming. It were a simple matter if all that had to be done for the protection of commerce was to possess a fleet in proportion to that commerce provided everyone did likewise; but they do not. The strength of Navies is not as the strength of their oversea commerce. The leading Powers build Navies out of all proportion to their amount of oversea trade.

The protection of trade is the power to make it inviolate against attack, and as we hold the biggest share to-day, so is our Navy to protect it, and their's to attack it; and if we are to keep our share and increase in prosperity, surely it is obvious that our power to do so depends on our Navy—an overwhelming Navy.

The endeavour by States, whose life is not dependent as ours is on the ordering of safe passage, to surpass us in numerical strength of ships can have for its object but one, and that a sinister one to us. The object of disputing with us the ordering of safe passage, and thus the sapping of our trade, for as the Navy is the insurance for our oversea commerce, so does that insurance rise or fall in accordance with the proportionate superiority of our Navy over others.

It has been most seriously stated that because Great Britain possesses the greatest tonnage of commerce carriers afloat, we possess the command of the sea—a very wrongsided statement. Had its author substituted "we must obtain" for "we possess," he would have stated a truth that should be dinned into the ears of everyone who owes allegiance to the flag.

NAVY AND INVASION.

If the Elizabethan days may be considered as the beginning of the importance of our oversea trade, they may also be considered the beginning of those ideas of oversea invasions which looked for opposition, not as before (at the point of invasion of the enemy's territory), but as commencing from the point of embarkation of the invaders; in other words, that instead of waiting to crush the invader on your own shores, you endeavoured to crush him at sea on his way to those shores.

That this method of resisting invasion was not previously considered vital; the disquisition of Raleigh on the subject, where he says:—

"An army, to be transported oversea, and to be landed again in an enemy's country, and the place left to the choice of the invader, cannot be resisted on the coast of England without a fleet to impeach it; no, nor on the coast of France, or any other country, except every creek, port, or sandy bay, had a powerful army in each of them to make opposition."

"For there is no man so ignorant, that ships, without putting themselves out of breath, will easily outrun the soldiers that coast them,"

goes to prove, in fact, that the correct weapon to frustrate invasion is the fleet. It is, I think, a quite accepted fact, theoretically, that invasion oversea by an enemy however strong, cannot escape discovery and, perhaps, interception, if there is a fleet in being, doing something, and used with intelligence.

This is theoretical quite, proved over and over again by war games, etc., but is it in fact?

So far as history goes, yes!

But history points to the fact that the reason it is so is caused in no small degree by the sense of nervousness which is bound to occur when a large unprotected force is on the sea. The result is the increase of the convoys and more publicity; with more publicity, more details are known, and it eventually becomes a more or less simple conundrum for the fleet in being that is doing something.

It would be absurd to say that an inferior fleet in being will stop an invasion, because it is very obvious that all the invaders have to do is to destroy it, and then get across—but that is my point; they have to destroy it before they can get across in safety; they have, in other words, to "order safe passage"; and as invasion is one of the means whereby our country can be conquered, our Navy must be such that the invader cannot crush it, and so get across, and when across keep his army of occupation supplied—our fleet must be overwhelming. No one else must "order safe passage." To quote the words of Captain Gabriel Darrieus, the Professor of Strategy and Tactics at the French Naval War College, writing on Napoleon's attempt to invade England:—"It is not during a few hours only that it would have been necessary to be master of the sea, nor even during a few weeks; it was necessary to conquer this command of the sea definitely, by the energetic action of a powerful fleet, superior in moral and material force to that of England. This result accomplished would have made any landing in England useless, for the Government of that country would have humbly sued for peace."

An interesting passage, as it shows that our friends across the water quite realise the necessity of "ordering safe passage" before invading. Whether our country would have sued for peace before the definite landing of troops is open to doubt. Another passage, by the same author, is also of interest, as showing how thoroughly imbued with the importance of naval force are our neighbours:—

"It is altogether interesting to observe that Napoleon, great admirer of Hannibal, imbued with the military ideas of the Carthaginian general, was like him to succumb from lack of naval forces, and to lose the Empire of the World because he had lost that of the sea—Waterloo was the *coup de grâce*; Trafalgar was really the mortal wound."

Successful oversea invasion, like successful oversea commerce, demands the "ordering of safe passage." Invasion

through evasion can only be of short duration, for no invasion is adequate without supplies, and supplies that have to come from the invading country, or her possessions, to complete the downfall of the invaded. We are so situated, owing to a small defending army, and the dependence on oversea food supply, that the time required by invaders to bring us to our knees is proportionately short in comparison with other countries, and it is quite possible that should the invader manage to contain our fleets, either by attacking commerce and luring our fleets to protect it, or to fight, or chase, or blockade their main fleet, that time may be given the invading force to accomplish their object; but so long as our objective remains, the destruction of the transports, *i.e.*, the correct ordering of safe passage (for it is the prevention of anyone else using those lines of passage), this evasive invasion by the enemy cannot be accomplished, and they must resort to obtaining the ordering of safe passage to accomplish their object, they must fight our fleet, and as that fleet is placed in the best strategical position for accomplishing its object, they have to fight it at that time and place most convenient to our plans and most conducive to our victory. It may be said that this does not carry out the statement that the policy of the Navy is offensive, that our true defence is the offensive, but a moment's thought makes it clear.

The policy is offensive, but offensive to the correct object, which is the transports, the invaders, and not led away by side winds to the enemy's fleet. If this offensive object be kept in view, it will not be long before the enemy's fleet comes to blows, and the naval action takes place; but it takes place at our dictation and not at the enemy's, a victorious consummation of all strategic plans, and this applies not only to invasion of this island, but to invasion of any parts of our Empire. To prevent invasion the invaders must never land; the mere fact of landing, even if all their communications are cut and their fleet beaten, will have a bad moral effect, and should be avoided.

The question is often asked, what will happen if England is invaded? And the answer is always the same: She must not be invaded. The prevention must be at sea, and only by ordering safe passage at sea can this prevention be accomplished.

THE NAVY AND OUR DEPENDENCIES.

I am not going into the vexed questions of whether our magnificent self-governing possessions should work out their own defence—whether they should altogether run by themselves or not—sufficient is it that to-day the Mother country has to defend them, and that her primal weapon is her Navy. To-day the defence of our huge dependencies is dependent on the Navy; no succour can be given them except by sea; by the safe passage of vessels procured by the Navy; for our Army exists primarily to fight abroad, to defend our oversea possessions, and our oversea commercial rights, aided thereto and success-

made possible solely by the fleet, by the ordering of safe passage. In no discussion of the defence of our dependencies to-day can anything be done without safe passage, and that can only be obtained by the fleet—by the Navy. How are Australia, Canada, South Africa, even India, to be defended without safe passage? That the defence of these dependencies does not necessitate the maintenance of naval forces off their shores is admitted; their interests and life are one with the Mother country; and it is evident that the naval force should be gathered together in that position which is the strongest strategically to deliver the blow which assures victory, for as the Navy has to defend our lines of passage, so must its action in war to ensure that defence be actively offensive. A supine defence is worse even than an hysterical offence. The rapid mobility of the striking force, which is absolutely essential to success, again points to the fleet being stationed in the best strategical position, and not dispersed in driblets of small squadrons over the face of the globe, whose combination in time of war would involve the loss of that most valuable asset in war—rapidity. Although I do not wish to discuss, nor, indeed, am I in a position to, the assistance that the colonies should give to their own defence—a defence that is Imperial, for the fall of the Empire is the fall of the colony; yet looking at it quite impartially as an outsider, it seems to me that where there is a supply of about four million male population in Australia, Canada, and South Africa alone, it is curious, to put it mildly, that it is not used to meet the demands of national existence, and reminds me of the remark Bismarck is reported to have made when the question of getting ranges to take the place of Wimbledon was being discussed: "Ah! had Germany those Volunteers, they would not have to wait for ranges." Surely it does not require great statecraft to use all means to defend one's own.

NAVY AND BLOCKADING.

Blockading proper—that is, keeping the enemy within a port—is practically nowadays impossible, as the withdrawal at night of the main force from off the port to keep clear of torpedo attack, and the long range of coast defence guns by day, precludes the possibility of correct blockade; there is nothing to prevent the enemy coming out under cover of the guns by day, or behind a screen of destroyers at night, except mines, and it is doubtful if these cannot be cleared away sufficiently to leave a clear passage for the fleet. But strategic requirements will undoubtedly cause the watching of a port, as Nelson watched Toulon, with the hope of bringing the enemy to action in the open sea. Such, indeed, is meant nowadays by the majority of officers when the term blockade is used, and as the danger zone of ships blockaded varies, as the radii of offence of the port blockaded, the watching of a port is nowadays the closest form that the old days blockade can take.

One is not likely in war to have the happiness of finding the whole of the enemy's strength lying in harbour awaiting attack, such a case would be simplicity itself, of course; but that it may be necessary to watch a port with a force superior to that which it contains, is quite possible, and may, indeed, be of such importance as to render necessary the division of the fighting force; and it is a rule in war that the only excuse for such a division is such marked superiority of numbers that both divisions unsupported can hold their own. With an overwhelming Navy such division is in case of great need possible. The division I refer to is not the splitting up of cruisers, scouts, etc., but of the main body. That enemy's ports will have to be watched in war is most probable, and for this service a numerical superiority is a necessity.

The only thing that will keep the enemy in is fear of defeat if he comes out; and if he comes out he must be thrashed; either way ensures the safe passage, but the latter is, of course, the most decisive—to ensure either requires many eyes, that is ships.

NAVY AND INTELLIGENCE.

I do not mean by this that those who form the *personnel* of the fleet should be intelligent men; I take it they are, in fact, unless they are, they go, the Navy has no place for them, but I mean the obtaining of information in peace as well as in war; it is almost the most important function of a fleet. In peace it consists of obtaining and transmitting those details of information which effect the safe conduct of vessels in all parts of the globe, also the knowledge of the most usual routes, for they are also the quickest routes, and as such will be used in war; the numbers of vessels using those routes, the flags they fly, etc., the weather to be expected, and such other hydrographical information conducive to a quick grasp of what is to be expected when the fleet is required for its true function of war. The local supplies, the best positions for mines, and the other one-hundred-and-one things that only the trained naval mind can grasp, dissect, and apply. No place visited by H.M. ships is too small, or too obscure, to be thus dissected—war finds one in extraordinary places, and demands always and unceasingly information. Information that may seem trivial in peace, but which in war may be of great importance; but the information to be obtained in war, so necessary to an admiral commanding, confines itself to news of the enemy, and must be obtained at all hazards if the main fighting force is to be of successful use. It is perfectly true that the conduct of war cannot be learnt in the lecture room, but it nevertheless cannot be denied that however far removed from actuality the theoretical war games, etc., may be, they do show how immensely important, and how difficult to obtain, such information is, and, indeed, every manœuvres, however small, prove the difficulty and the importance of obtaining correct information. History shows it us in

every admiral's dispatch, and the dire straits commanders have been in both ashore and afloat for the want of it, and to what opportunities of success the obtaining of it has opened up. That information is, of course, obtained by scouts, as far as the Navy is concerned, and upon its rapid obtaining and accuracy does the whole plan depend. Provided accurate and useful information is obtained, a scout is well lost—without information the Navy is powerless to order safe passage.

NAVY AND MOBILITY.

Just one word about mobility. It is essential to naval success just as it is to military success. Just as the speedier and more mobile army can seize and decide on its battlefield, so does the rapid mobility of a fleet ensure its action in chosen waters. But mobility in a naval force has limitations just the same as that of a military force. To possess speed in the extreme armament and armour must suffer—so that it is limited to the amount of armament and armour that it is desired to bring into action. The speed, the offensive force, and the defence of a ship are co-ordinate. The latter factor came into play with armour; before that time the defence of a ship was merged in her offensive force; so that in accordance with the requirements of the special type of vessel, so are the changes in the factors played. The speed of battleships is a question fiercely controverted at the present time. To what extent must the armour and armament give place to speed and coal endurance? Is it advisable to build with a view of long endurance and slow speed, or of long endurance at slow speed with power to steam at high speed with short endurance? and so forth. But the true mobility consists of the certainty that whatever the speed desired and designed for, every unit of the force can be depended upon to do it and keep it up; so that plans upon which the safety of the nation depend emerge from the paper on which they are penned into the sure actuality of fact.

CONCLUSIONS—NAVY.

To sum up briefly, then, those functions that our Navy has to pursue, if our country is to retain her present proud position, we can argue it surely thus:—

If the Navy has to be strong enough to defend the lines of passage, if the Navy has to be strong enough to defeat the enemy, then this country must have an overwhelming Navy; and if for commercial prosperity in peace it is most useful to show the flag in all parts of the globe, without disturbing the strategical dispositions of the fighting force, one more argument in favour of the preponderance of numerical strength of the Navy is made good.

It must defend those routes and yet defeat the enemy; when it has done this, and not before, can we claim to "order safe passage." The moment the enemy's strength forces the aban-

donment of one of these objects for the sure fulfilment of the other, the ordering of safe passage has gone from us.

That a time comes, if competition is continued, when the dominating country is at the end of her tether of resources to maintain superiority, and by strenuous efforts her competitors obtain that position which enables them to dispute the "ordering of safe passage," is, of course, quite possible; but side by side with that possibility must also lie the fact that the preponderance of her resources has ceased; that her trade is falling from its high place. The naval force of this country, and the prosperity of her commerce, are irrevocably wedded.

Let me here most emphatically state that numbers alone will not give an overwhelming force; it must be overwhelming in the true sense, the efficient sense—efficiency of the *personnel*, efficiency of the *matériel*, and efficiency of the *morale*.

OPPORTUNITIES OF PORT.

No disquisition on Burkes' "Opportunities of Port," no arguments for or against can be a necessity after the sad voyage of Admiral Rojéstvenski's squadron to the Far East; that voyage is the whole subject put in a nutshell; the facts attending it hit one in the face and leave one gasping without a breath to utter a word in disparagement of the necessities of opportunities of port. Other nations have not secured these as we have; but of late years they have realised its importance. Germany's wish to acquire Mogador in Africa; her acquisition of Kiaouchau in China; the Dutch at Acheen in the East; the French at Saigon and the northern parts of Africa; and the wish for acquisition by the United States of West Indian islands, in view of the opening of the Panama Canal; their occupation of the Philippines in the East, to mention only a few, bear witness. It speaks volumes for the tenacity of purpose and longsighted policy of our forbears that the doctrine of advanced bases originated by Drake has been steadily pursued, to leave our Empire to-day supplied with strategic outposts all over the globe—outposts of supply and refuge, so essential to a world-wide Empire's requirements — outposts which enable our fleets to knock at the enemy's very doors. For the sooner you can check the quicker you can strike; the closer you can watch the sources from which your enemies' offensive weapons issue, the greater your advantage; and the more numerous the points on the lines of passage that you possess the greater difficulty has the enemy to disturb those lines, and they also assist in furthering the offensive plans to ensure the successful conclusion of the war; a final and lasting conclusion it must be, without which the war is vain.

HARBOURS OF REPAIR.

I have said they must be impregnable to attack, that is of course the beau ideal; but after the success of the Japanese

at Port Arthur no one, I think, can say that that ideal can be assuredly reached. But it is essential to the well-being of a fleet that docking and repairs, refitting, rearming, ammunitioning, provisioning, etc., should be executed without molestation. Apart from its necessity to ensure thoroughness and efficiency, it means a well-earned and necessary relief from watchful strain of the *personnel*.

That the defences of our naval ports are causing considerable disquietude in the minds of many to-day is certain, but as that disquietude is evident, most unnecessarily in regard to anything that touches our naval forces, it is extremely difficult to know whether there is any reason for it or not. Though every ship, battery, or regiment that one serves in is the smartest and best the world over, the Services are for a perpetual certainty going to the dogs, and as long as the British spirit of emulation, keenness, and striving for perfection exists, I see no reasonable prospect of their ceasing to pursue that course, or of ever reaching their canine destination wherever that may be. Of one thing, however, we may be sure: that if our ports are not adequately defended, they rest for their existence on the ordering of safe passage quite as much as our commerce does, and though for the use of the Navy depend on that force for their protection.

If their beau ideal is impregnability to attack, it is also the impregnability without lessening the desired force of the Army, and without depleting the Treasury to such an extent as to lessen the finding of a requisite Navy. Such cannot, unfortunately, be, and we have to leave our harbours of repair assailable and leaning primarily for support on that weapon which they exist to renovate and keep efficient.

The result is arming of naval ports at home and a few selected harbours of strategic value abroad to the full extent that they can be without diverting the main channel of the Treasury from the fighting forces, and that is of course the only solution. There are many who would disarm even these few, and trust implicitly to the fleet, expecting from that arm more still than it has to accomplish already. One of the gravest difficulties in the present time, when the changes in design of ships are so frequent and their efficient lives so short, is of course docks, which take so much longer to build than the ships for whose sakes they exist; and there seems as yet to be no limit to the size ships may become. These ports of repair must primarily have sufficient repairing and replacing stock, and staffs to work them rapidly and efficiently. Then the protection from weather must be secure, the protection from the enemy as great as is consistent with the policy laid down, and the waterways simple. Our country's great drawback, as one requiring the means to order safe passage, is the lack of good harbours, and the continual expense entailed to keep by artificial means the few harbours we possess commensurate with their requirements. It is an expense that more fortunate countries

do not have to meet, and we are lucky in the possession abroad of good harbours, greatly enhancing our "opportunities of port," and in this respect inexpensive.

It is constantly said of our defended ports abroad that they are so defended to liberate the Navy from their defence for the purposes of offensive actions. That is not a correct or sufficient reason, and is, I submit, not the primary reason of their existence.

The objective policy of the Navy must be offensive, for only by the offensive can it defend the lines of passage; can it order safe passage when it is in dispute. I hold that the real reason of these armed strategical posts is to give advanced bases from which the Navy can pounce on its enemies in pursuit of its offensive action. It is surely logical that one does not acquire strategical ports for the mere purpose of defending them by the fleet, and thereby adding their defence to the defence of the lines of passage. Rather the sounder policy of acquiring those ports and then defending them so that the fleet, victualled, armed, etc., in all respects prepared for its fighting function, can proceed to its offensive action from a point close to its area of work, knowing that in its absence that point can look after itself. True, that if that point is not of itself defended it can only be defended by the fleet; but to secure such a point merely for the purpose of multiplying the amount of territory to be defended, without in any way adding to the commerce of the country, is of course illogical and the worst strategy. They are for the purpose of advanced bases, and as such must be in a position to repair a fleet and keep up a fleet. They are of course expensive items, and just as Rojestvenski's voyage shows the necessity of opportunities of port, so is it used by many as an argument, that merely because without harbours of repair he was able to bring his fleet into action at the other side of the world, that their want was not felt sufficiently to justify the expense of their upkeep. But if we consider the immense advantage that a harbour of repair like Singapore would have been to the Russians, whereby their fleet could have gone into action fresh and efficient, surely its advantages are most triumphantly shown. The Japanese fleet could not have reduced that port; they had not the naval strength to look after a port so far from the area of action without detracting most gravely from their watch on the fleets in Port Arthur and Vladivostok.

That these defended harbours of refuge do lie in the trade routes is only natural; it is their best strategical position, and if the defence of trade is to be by convoy, as some advocate, their positions become not only harbours of repair but harbours of refuge; and even if the trade carriers are not to be convoyed, they still are to those trade carriers harbours of refuge, which may mean—nay, must mean—the escape from capture of large quantities of our commerce.

I do not see how any commerce, apart from the actual requirements of the human body, i.e., food stuffs, can nowadays

be convoyed with success. All other commerce depends for its value on rapidity of transit, and it is this that will, unless we order safe passage, find the fate of the Northern States in the American Civil War, namely, transference to neutral bottoms, accompanied by a loss in British shipping trade, which I doubt this country will ever recover.

Having thus very briefly discussed those accessories which are essential to give us the power or force whereby we may order safe passage, and without which we are unable to do so, we may turn briefly to the importance that this ordering of safe passage is to other countries not so situated.

As I have endeavoured to show, the ordering of safe passage is to us a necessity for our existence as a nation; but it is not a necessity to any other Power in the same degree.

It is to us, and to all island States, our defence, our only defence, to which everything else must be secondary—to other countries it is a matter for offence. It is quite true that no war is waged which does not feel the effect of sea power to a greater or less extent.

To us it is everything; to others it is not so much. Without sea power superior to our own no country can defy us successfully—at any rate, theoretically—but in war between any two other nations that nation which can order safe passage has an advantageous asset. It does not, as history shows, mean that they win, but it does and must assist success and lessen defeat.

The ordering of safe passage is decided in war; decided between the two belligerents. It is their ordering of safe passage which concerns them. And that is, I believe, the true reason for the growth of fleets.

The ordering of safe passage is always an asset to the Power possessing it. It is a necessity of defence to the island State; it is a necessity of offence to the island's enemies.

I do not propose to discuss the functions of the naval force of a country which nearly appertains to the second case I put forward at the commencement, because it would be mere repetition. The functions of all naval forces are on a broad basis the same.

Continental nations have other frontiers to guard besides the sea coast, and their main line of defence is the Army, as a rule. When they strengthen their fleet it is generally with the object of disputing the "ordering of safe passage." If history is to be the guide, disputing it with the dominating power—the outcome of expansion and competition in that Power's markets—for no nation is going to build expensive fleets and maintain them without an object, and the object of a fleet is the "ordering of safe passage," and the "ordering of safe passage" is the life of our Empire.

History, the guide, counsellor, and friend of all who study the art of war, is rich in examples of the importance of ordering safe passage, and also of the enormous and vital part it has played in all naval wars, and I propose therefore to quote cases

which seem to me to teach us that the term Command of the Sea means purely and simply the ordering of safe passage; also these cases illustrate those true functions of the fleet which I have enumerated, and it is not merely by referring to big events that history teaches us our lessons; they are equally as well taught in those examples of smaller events, which do not of their smallness force themselves to the fore. And those cases of utter failure which are glossed over and buried in the past, if looked at judicially and calmly, teach bitter lessons of what might have been; as do those of gigantic successes which, if dissected and analysed, show us that the true reason was not the old idea of one Englishman equals three Frenchmen, but that the strategy, whereby the ordering of safe passage was won, was on the victor's side more correct. Examples there are undoubtedly where fortune showered her favours seemingly on that side which had pursued a most reckless course, but we find, I contend, a very fair balance of her favours in all wars. Seldom if ever does she favour continuously the erring strategist or tactician.

In 1848 the Duchies of Schleswig and Holstein formed a constitutional monarchy of Denmark, united by a personal tie to the absolute monarchy of that country. The King, Duke Frederick VII., who ascended the throne in January of that year, intimidated by the Radical Party, conscious of no successor or the likelihood of one whose personal tie would still hold the Duchies loyal to Denmark, pronounced a constitutional monarchy of Denmark and Schleswig; in other words, he determined to annex Schleswig, Holstein to revert to Germany.

The Duchies, protesting, set up a provisional Government, called out their armies, which formed a fourth part, roughly, of the hitherto Danish land forces, and seized Rendsberg. A state of war thus prevailed between Denmark and the two Duchies. Prussia, Hanover, and the Diet of the German Confederation espoused the cause of the Duchies and added their armies to their defence.

Whilst these allies were collecting in Holstein, the Danes invaded Schleswig, drove back the armies of the Duchies, and seized the capital town of the same. The Prussian allies, having been collected, advanced from Rendsberg and attacked in two divisions—one to hold the enemy in front and the other to attack him in the flank on the eastward or sea side. The frontal attack defeated the Danes, who retired in disorder, but were enabled, through the bad generalship of their foes, to retire by sea to the island of Alsens before the flank attack could be delivered.

Now, Denmark had a navy, her opponents had not. The position was a galling one to the Duchies and their allies. They had driven the invaders away but could not follow up to complete the defeat. The Danes then placed a part of their force in Jutland, with a view of drawing their enemies there. The design was successful; the Prussians followed, leaving a

small force in Schleswig to watch Alsen. The Danes recrossed the Strait and fell upon and badly defeated them. When the Prussians realised their mistake they turned back to the relief of their friends, hotly pursued by a fresh force of the Danes landed in Jutland.

The Prussian invasion of Jutland called forth the energetic protests of Sweden and Russia, with the result that an armistice was declared, which lasted through the winter—the time least adapted to naval activity.

The Danish fleet had during the operations of 1848 wrought complete havoc on the commerce of her enemies and blockaded the North Sea and Baltic ports. In the spring of 1849 Denmark terminated the armistice and again attacked and severely handled the armies of the Duchies, who had been left to their fate by their allies at the dictation of Russia, until in 1851, through the intervention of Russia and Austria, Prussia assisted their former enemies to force the disbandment of the Schleswig and Holstein armies.

This is a brief summary from Mr. Spenser Wilkinson's work, "War and Policy," and is chosen as a striking example of the ordering of safe passage. Denmark had a fleet; the Duchies had not; consequently Denmark's armies were placed rapidly at desired points by sea.

Sea commerce was destroyed.

Ports were blockaded.

Her defeat on shore was robbed of results.

For three years the naval power was enabled to harass her enemy until her terms were accepted. Surely this "ordering of safe passage" was command of the sea.

True, Sweden and Russia, and eventually Austria, intervened, but if the Duchies had had a Navy whereby they could have disputed safe passage, followed the army to Alsen, and annihilated it, defeated the Danish fleet, and obtained the ordering of safe passage, the war would have been over before any intervention took place.

In February of 1879, Chili declared war on Peru and Bolivia, the latter country having no Navy. Owing to the nature of the scene of operations, communications were by sea and the ordering of safe passage was, therefore, in primary dispute.

The Chilian naval force consisted of:

2 Ironclad Battleships.

3 Corvettes.

1 Sloop.

1 Gunvessel.

1 Gunboat.

1 Paddle Steamer.

1 Improvised Cruiser (1 gun).

1 Transport.

Peru Navy consisted of :—

- 3 Ironclads.
- 1 Armoured Frigate.
- 1 Corvette.
- 1 Gunvessel.
- 4 Transports.

Two of the Peruvian transports were lightly armed. Both sides possessed spar torpedo boats, and Peru was in possession of some few Lay torpedoes.

The Chilians were handicapped by want of harbours, having no dock at Valparaiso for their heavy ships, whereas Peru had Callao well supplied and fortified, as well as some minor ports. Chili commenced by a blockade of Iquique, but hearing that the Peruvian fleet were accompanying some transports from Callao to Arica with the President on board, the Chilians put to sea, leaving behind the old and slow *Esmeralda* and *Covadonga* to keep up the blockade. The Peruvians easily evaded the Chilian fleet, and landed their President at Arica—the *Huascar* and *Independencia* coming south to Iquique, where they endeavoured to sink the two old Chilian vessels. The story of the engagement is too well known to require repeating here, suffice it to say that the Chilians lost the *Esmeralda* after a stubborn defence, and the *Covadonga* escaped, whilst the Peruvians lost their fine vessel the *Independencia*, and had the *Huascar* damaged—a decided win to Chili obtained by good shooting and discipline, against just the opposite—an accomplishment by personnel, and purely personnel, which has few equals in history.

The Chilians felt greatly the want of speed to cope with the *Huascar*, who harassed trade and ports at will, so after great efforts, and at some risk, they cleaned the foul bottom of their best ship, the *Almirante Cochrane*, at Valparaiso, by divers, and on 7th October she was at sea with the whole fleet proceeding to Point Angamos, the objective being the *Huascar*. That vessel, against the advice of her Commander, Admiral Grau, had been keeping the sea continuously without docking at Callao, and was, in consequence, very foul. She was found off Angamos, chased, and captured by the *Cochrane*, assisted by the *Blanco Encalada*, after a stubborn and bloody fight, and added to the Chilian Navy. Peru had now lost two of her best ships, and apparently gave up any efforts with the others; they were kept in harbour and pounded from seaward by the Chilians, who had now the ordering of safe passage, and landing their troops at their chosen places, brought after a severe struggle, on shore their enemies to their knees. The Peruvians started with many advantages, of which the possession of harbours was one of the greatest. Their naval force was rapid and mobile, and could have been quickly repaired, but, thanks to the inefficiency of the personnel, an inefficiency only made more striking by the splendid ability of Admiral Grau and a

few officers, she did not use her advantages to the utmost, lost the ordering of safe passage, and thereby the war.

On 20th June, 1866, Italy declared war on Austria, and the naval part of that war illustrates the importance of the "ordering of safe passage" as well, if not better, than any other, together with the importance of the efficiency of the *personnel*; the fatal mistakes that ignorance of the correct principles of naval war may lead to; the impotence of invasion without the ordering of safe passage; and the uselessness of a strong naval force not assuming an immediate offensive action; the false doctrine of following a minor objective leading to no ulterior object; and the hopeless error of a strong fleet not keeping the sea.

Italy's object was the ordering of safe passage in the Adriatic, only obtainable by the prevention of the enemy's power to molest that safe passage. Her policy should have been offensive.

Austria's policy with a weaker fleet was purely defensive, and correctly so, until such time as opportunity occurred to take the offensive. That opportunity did occur, and was brilliantly seized and taken advantage of to such an extent that Italy failed not only to ever order safe passage but also entirely to attain her minor object, the capture of Lissa, for which she sacrificed her fleet. It would appear that her only object in the capture of Lissa was to strike a blow at the prestige of Austria; by her failure the blow rebounded on herself, and not only did her prestige suffer through it, but by the vacillation of Persano her *moral* also—vacillation that has been called an even harder name.

Persano had orders to sweep the enemy from the Adriatic and attack and blockade them whenever he found them ("Four Modern Campaigns," W. Laird Clowes). It was not, however, until 16th July, a month after the declaration of war, that the Italian fleet sailed, and it then sailed with the intention of capturing Lissa. The Austrian fleet was known to be "in being," but not the slightest attempt to even locate their whereabouts seems to have been made. Two vessels were ordered to cruise as lookouts—one between Punta Planca and St. Andrea, and one between St. Andrea and Pelagona, their cruising ground being about 40 miles in length, and its nearest point 20 miles from Lissa. Off Busa Island, 5 miles to the S.W. of Lissa, two other lookout vessels were stationed.

To effect their object the fleet of 22 vessels was divided up and attacked Comisa, Manego, and S. Georgio, landing to be made at Comisa or Manego as was most possible.

The attack commenced on the forenoon of the 18th, and failed. The fleet collecting off S. Georgio, it was arranged to attempt a landing at Port Karober, the fleet bombarding S. Georgio, and at 7 p.m. withdrew.

The forenoon of the 19th was occupied in more bombardment of S. Georgio. In the afternoon a renewed bombardment

of Ports S. Georgio and Comisa was undertaken, and an attempt to land at Port Karoher ordered.

The landing was never effected, Admiral Albini giving in excuse of his disobedience the state of the sea. As Port Karoher was under the lee, it would appear that there was no truth in Albini's statement. In the evening the fleet withdrew. No further scouting was indulged in by Persano, although information on the evening of the 18th had been obtained by his gunboats, who cut the telegraph cable on that day, that a telegram had come through to the effect that the Austrian fleet might be expected off Lissa on the morning of the 20th. It was decided to make another and similar attempt, reinforcements of the landing party having arrived.

At 8 a.m. Albini's division preparing to land at Port Karoher; and Persano, commencing the bombardment, and two ships on their way to Comisa, news arrived that the Austrians were in sight.

The Italian fleet, imperfectly collected, now found themselves attacked by their enemies in a wedge formation. Tegetthoff's formation has been much criticised, but whatever its demerits, it was an undoubted advantage, inasmuch as it was a formation at all, whereas the Italians had not time to get into one before the enemy was upon them. The Austrians' main idea was to sink the enemy by ramming, and close action was the order of the day. Persano hastily shifted his flag to the *Affondatore*, in which he accomplished nothing, and confused his own fleet, escaping the fate of his late shipmates in the *Re Italia* to meet his sentence later by court-martial of deprivation of his rank and dismissal from the Service.

The Italian fleet, entirely defeated, retired to Ancona, Albini living up to his reputation by remaining inactive and out of danger during the whole fight. The Italians lost two ships, and many were badly damaged. With so large a force still opposed to him, Tegetthoff did not feel justified in pursuing. He was ready with his whole fleet to meet them again next day, but the Italians never appeared. The victorious Austrians returned to Fasano, their flag still flying over Lissa. The Italian ordering of safe passage successfully disputed.

It was a victory for the *personnel* as well as for correct strategy against the reverse; another lesson added to its many predecessors that invasion cannot be accomplished over sea without the ordering of safe passage; another example in favour of the small fleet doing something with intelligence; a fitting illustration that fleets are intended to fight fleets and control the sea, and marking the necessity of obtaining intelligence, of using it rapidly when obtained, concentration of force on the true objective, and finally the necessity of intelligent, loyal cohesion of purpose defined by Captain Mahan as "military obedience."

In these three wars we have three different phases of "ordering of safe passage," and all three had invasion of

territory as the object. True, the Italian object was not originally invasion without first defeating their enemy at sea; but eventually, as we have seen, that was the object aimed at by Persano and agreed to by his Government, thanks to his vacillation at the commencement of the war.

In the first war quoted the "ordering of safe passage" was never in dispute, as the would-be disputant had no naval force at his disposal, and so the moment the Danes got to sea they only had to choose the time and place for the next attack. They had the complete ordering of safe passage from the beginning—their sea coasts were safe and so was their commerce; they could invade and destroy commerce at will, thanks to their naval force.

In the second case the "ordering of safe passage" was in strenuous dispute. The disputants, starting comparatively equal, one suffering severely from depredations on her coasts owing to want of speed, but winning when able to bring her adversary to blows, suffering depredations to her commerce and supplies, even after getting the upper hand, until having obtained more mobility the power to molest her lines of passage was crushed, thereby enabling her to order safe passage, and thus invade and destroy commerce at will and win the war.

The third case illustrates again the ordering of safe passage, but with one force stronger than the other, by the improper use of which the ordering of safe passage was successfully disputed by the weaker for a short time, but leaving it disputed because the power to molest it was never crushed. Neither side won the ordering of safe passage.

I have taken these illustrations because of their simplicity and brevity, and because thereby the lessons they teach are easily seen, and the "ordering of safe passage" effectively illustrated; also, though the first case was not a modern one, yet as only one side had a fleet it would hold good for all time. The last two were fairly modern, and, at any rate, in the days of steam propulsion, thus nullifying any arguments in favour of regarding the fundamental principles of naval warfare as being different owing to modern inventions and immunity to the direction of the wind or the time limit of physical endurance on the boom of a sweep or oar. Those principles really remain the same, and as regards the ordering of safe passage have been, are, and will be, the same so long as war is waged upon the sea.

When, in 1861, the United States of America were plunged in civil war, the whole energy of the Federals, with their superior naval force, was exerted in the effort to blockade the southern ports, and to gain the control of the Mississippi, the river which strategically dominated the situation.

They were happy in the *personnel* of their fleet, composed as it was of the majority of their trained men, and reinforced

by fishermen and seamen ; the Confederates lacked such advantages, and foreigners were largely employed by them.

The North were also happy in the possession of *matériel* rendering repairs, arming and building rapid and facile ; the South depending for this from oversea. Both sides possessed protected harbours of refuge, but the innovation of the monitor and ironclad turret ships brought a new force into play against coast defence, which that defence had not been constructed to withstand. The want of opportunities of port was felt by both belligerents ; but, thanks to the laxness with which International Law was wielded by the neutrals, their want was not felt to the extent that it would be in the present day. The South depended on their oversea commerce, and were not like their opponents, almost self-contained, so that the blocking of their ports was a severe and mortal blow, and perfectly correct strategy, as also was the taking of the sea mouths of the Mississippi in conjunction with the force acting from its head, the two—one going up and one coming down the river—forming an effectual pair of nutcrackers to crunch the stubborn Southern nut. But the Federals did not defend their sea commerce ; it matters not whether they failed to see the importance of it, or whether they had insufficient naval force to do it, the fact remains that the commerce was not defended ; their opponent's strength impelled them to abandon that object for the sure fulfilment of the other, and a blow was struck that has not yet been recovered. From the proud position of possessing a magnificent host of sea commerce carriers, almost unrivalled in the world, they descended to the possession of but a few. Nearly all the Northern commerce was transferred to neutral bottoms, so great was the risk their vessels ran from capture, leaving the United States to-day still striving to better her sea commerce-carrying trade. A glance at the chart showing the voyages and captures of the *Alabama* alone in "Ironclads in Action," by H. W. Wilson, will illustrate the one, and any American marine journal of to-day the latter. Until the Southern commerce destroyers were crushed the North never "ordered safe passage," although their blockades were successful and the Mississippi in their hands.

Although the war between Germany and France in 1870 was purely a land struggle, the naval force of France made itself felt. Germany's Navy was too weak to dispute the "ordering of safe passage," and her ships were confined to the harbours, and the safe passage entirely surrendered to her enemy. The broad results of this "ordering of safe passage" on the part of France were firstly the stoppage of German oversea trade amounting to a loss of £200,000 per diem. Secondly, the retention by Germany, for fear of an oversea attack on her rear, of 120,000 troops. Thirdly, the importation of munitions of war into France for the upkeep of her army. As I have previously stated, the possession of the "ordering of safe passage" does not mean the necessary winning of a war, but always does mean

a tremendous asset. Had France and Germany been separated by water, the armies of the latter would have been of no avail.

True, German oversea trade has increased enormously since then, and is doing so with rapid strides still, but let it be remembered that she had no high place to fall from, and that the subjugation of her enemy was the filling of her coffers—unlike the Civil War of America, where the victorious North had to take the beaten South into the union with all its losses.

In our second and third wars with Holland, as Admiral Colombe in "Naval Warfare" has pointed out, the Dutch gave up all idea of protecting oversea trade, and forbade it during the time that the ordering of safe passage was in dispute. Their trade held a foremost place in the world, and our obtaining eventually of the "ordering of safe passage" by the Peace signed in February, 1763, which recognised the absolute supremacy of the British flag from Cape Finisterre to Norway ("Influence of Sea Power on History," Mahan) transferred that trade to us. Where is the trade of Holland to-day? I do not say that the loss of "ordering of safe passage" is the sole reason for the downfall for ever of a nation's trade, but that it means a terrific blow to it who can deny?

It would seem to me that these three instances are worthy of consideration. I have chosen them as showing three phases of the relations existing between oversea commerce in war and the ordering of safe passage.

In the first war quoted, the "ordering of safe passage" was disputed. The whole method of disputing it being by blockade on the part of the North, the severity of which they trusted would be sufficient to protect their oversea commerce, at least, thus I read the war. The South, on the other hand, disputed it by harassing the North oversea commerce; the blockade could not be kept effective enough to prevent this, although it was effective enough to stop imports in large quantities; imports in small quantities undoubtedly did get through, though not sufficient to meet the demand.

It is thus seen that the commerce was left alone, discarded, and put outside the problem by the North; their merchants thereupon transhipped to neutral bottoms, and that effect is still felt. Schemes are being tried to bring back the old proud position, up to the present without avail, the seagoing population is diminishing, the alien more and more enters into the problem. Coal for the fleet has to be carried in foreign bottoms, merchandise likewise. The oversea shipping trade is still broken.

In the second case, Germany, realising that she could, under no circumstances, "order safe passage," did not dispute it, and kept her ships at home; but the transference of her trade to neutral bottoms was small; her trade oversea was but begun to assume dimensions with a rapidity of growth that has surprised, and is still surprising, the world. She recognised the uselessness of endeavouring to keep oversea trade whilst

unable to "order safe passage," and so did not attempt it; her efforts in commerce destroying was *nil*, but, thanks to the rapidity of the war, her losses were not very enormous, and she could afford at that time to do without it. Self-contained as she was, the loss of her oversea commerce did not spell ruin.

In the third case, the Dutch, through bitter experience, had learnt the lesson, taught by us, and they did precisely the same as regards their commerce; but they disputed the ordering of safe passage with us most vigorously, and failed to obtain it. With that failure went any hope of retrieval, for it must not be forgotten that they commenced their war with a great preponderance of oversea commerce over ours. Our commerce was not stopped like theirs, but it suffered very heavily, and that fact made the war unpopular and hastened on peace before we had obtained in war the "ordering of safe passage." Peace was made with it still disputed, though the Dutch undoubtedly had the worst of it, and their enormous trade died from inanition. They were not self-contained, and oversea commerce was vital to them; unable to trade, beaten at sea, and ruined in pocket, they have taken that place amongst nations assigned to those who do not protect their own interests; but let it be remembered that Holland is not surrounded by the sea; that her very food does not necessitate oversea traffic—ours does.

In 1754 really commenced our struggle with France for North America, although war was not formally declared until 1756; acts of war were committed by both sides, and prisoners and ships taken. The struggle was not one by itself; it did not remain the limited object of the war. War was being waged in the West Indies, Europe, and the East; but I wish, if possible, to consider this particular phase by itself, to endeavour to get out of it the use to which our preponderance of naval strength was put in regard to the seizure of Canada from France, and to what extent "ordering of safe passage" was obtained and used.

As we marshal the facts we must, for the objects of this paper, put outside our vision all matter relative to the reasons why more naval force was not used; discard from our horizon the doings in Europe and other quarters, except in those few cases where, to get at the end we are aiming for, they must obtrude themselves. The real beginning was the attempted prevention by the French of our Colonists' right of trade in the buffer Indian Territory to the South of Lake Erie—mark how commerce begins the war. Although the two Colonial forces fought war was not officially declared. England at once, in the beginning of 1755, dispatched a detachment to stiffen her Colonial forces, and a squadron under Commodore Keppel. These were peaceful acts—no opposition was made—the ordering of safe passage was not yet in dispute.

France, as a countermove, organised a large force of troops for Canada, far outweighing our first Expeditionary Force. The news was received in England, and a fleet was despatched,

under Boscawen, with orders to join Keppel at Halifax, and then to watch off Louisbourg, to intercept and capture the transports. He sailed a week before the French. Brest, the port for which the French expedition was to sail, was being watched, and so when it actually did sail a week after Boscawen's departure, they were able to report their strength, and that as well as the original fleet detailed for America, they were being escorted by a strong force, but whether right across, or only to see them fairly on the way, was a case of pure conjecture. England sent a reinforcement of ships after Boscawen, under Holborn, and they sailed a week after the French.

In due course Boscawen arrived off Newfoundland, and proceeded to take up his station off Cape Race. He apparently sighted his objective, but lost it again in the fog, and on the following day captured two of the French only, the remainder having got clear away. Later, joined by Holborn, he was off Louisbourg; six of the French were inside, and no doubt was felt that the remainder had made up the St. Lawrence.

Boscawen's fleet, weakened by disease, was eventually recalled, and the French Admiral, De la Motte, having landed his forces, returned to France again, escaping capture both on the American coasts and the French. Boscawen's fleet had orders after De la Motte got through to the St. Lawrence, to capture all French ships that he came across at sea, and this was done. It was not, however, until France seized Minorca, in May of 1756, that war was declared.

On 16th April, 1757, Holborn was despatched with a fleet and troops to Halifax from England, but through delays he did not reach there until July. In the meantime the French had concentrated a large force in Louisbourg.

In June, the British troops at New York made good their passage from that place to Halifax, escorted by the small North American fleet. Although by that time the French concentration at Louisbourg had taken place, they did not dispute the passage of this force. So that in July the French are concentrated at Louisbourg, and the English at Halifax.

It was the English intention to attack Louisbourg, but when the overwhelming naval strength of the French was known, the expedition was abandoned, and the port watched. De la Motte, who was again in command, had reduced the force at his disposal by sending some of his ships to the St. Lawrence, and would not give action. His object in preventing the capture of Louisbourg accomplished, he remained in port awaiting an opportunity to return to France. Holborn, who had been reinforced, watched him closely—the winter approaching, with bad weather, made it difficult; he had a rendezvous ready off Ushant in case De la Motte escaped him in the Atlantic, with a view of checking him there; but all plans were upset by a hurricane, which so damaged his fleet that it was only by consummate seamanship he got them home, leaving the sea clear for De la Motte to return, which he did (weather again favouring him

off Brest by driving off Hawke, who was awaiting him), but with ships in bad condition, and crews struck down with disease, thanks to their long immurement by Holborn's energy in Louisbourg.

Thus we perceive that a year before war was declared, in 1756, England had determined to dispute the safe passage of the French troops, but only at the distant point; the effort was abortive, thanks to the weather, and the instrument—Boscawen's fleet—was used to destroy commerce. So long as the French fleet lay quiescent, this part of disputing safe passage could be done.

The second movement, in 1757, gave rise to a mistake by France, which might have lost her her possessions sooner. She concentrated at Louisbourg for the sole intention of disputing safe passage to the British troops—she had two opportunities thrown at her, and took advantage of neither. Successfully avoiding her enemy's watching squadrons at Brest and Toulon, she had completed her concentration at Louisbourg just as the New York expedition sailed. She had an opportunity of destroying the force from New York first, and Holborn's force afterwards, but for some reason she did not; she then accepted a passive defensive, which threw open to her enemies the destruction of her commerce, and kept her naval force immured in Louisbourg to rot with fever. The power of the elements, against which man is helpless, came to her aid, and the movement ended with the safe passage of both belligerents left undisputed.

But suppose the elements had not intervened, what then? De la Motte must have fallen a prey to Holborn, and a force removed from the French disputants which they could ill afford, and the attack on Louisbourg the following spring made easy.

In 1758 it was decided to attack Louisbourg again. The idea was to hold the French from leaving Toulon, Rochefort, and Brest, blockade Louisbourg, despatch a strong fleet to Halifax, and send the transports over with small convoy.

The forces from Brest only got away, and, thanks to the weather, eluded the Louisbourg blockading force. May found Boscawen with his fleet and troopships at Halifax. Louisbourg was attacked and captured by July, together with the fleet it contained; but it was too late in the year to attempt the St. Lawrence, which was the original plan, and leaving the troops, together with a small squadron, to winter at Halifax, Boscawen with his fleet returned.

The capture of Louisbourg cannot but strike one with the many points of similarity it furnishes to the taking in recent days of Port Arthur. The French fleet remained in port to the bitter end—two ships were cut out under the guns of their own forts. The English bombarded the ships from the shore, and so hot was the fire that they were deserted, and their crews used in the defences; bags of tobacco, etc., were used to protect their decks, and eventually five frigates sunk in the entrance. But

it must not be forgotten that by keeping the fleet in the harbour the British fleet was kept out; Boscawen would not enter under the combined fire of ships and forts, nor also that the British fleet was in a great superiority. A portion of the French naval force, before the attack on Louisbourg, had got safely into Quebec. The French desired delay, and obtained a respite at any rate for that year, as nothing could be done in the winter months in the St. Lawrence because of the ice.

The ordering of safe passage was not even yet procured; true, the British assembled their forces and cruised the sea, but they did not prevent the totality of the French force from crossing also, so that the lines of passage were still in dispute. Every expedition of both belligerents had been got over, either by evasion or because their passage was not disputed.

In 1759, the conquest of Canada was continued. As far as the naval enterprise went, that meant the capture of the St. Lawrence and Quebec. For this purpose it was essential that no reinforcements of the enemy's should get up the river to Quebec, and it was for this purpose that a squadron had been left behind to winter in Halifax. Their function was to dispute and hold the passage of the St. Lawrence as soon as the ice broke up. Preventing any French reinforcements or ships from getting up the river, and thus ensuring the safe passage of our own expedition to Quebec, for if the French managed to send over a strong naval force to oppose Durrell's squadron, it could not get past him without serious loss, and would be in no case to prevent the advance of the expedition which was to be sent accompanied by a strong fleet under Saunders. If, however, the river was not seized directly it was navigable, there would be time for French reinforcements to arrive and proceed undisputed to Quebec, thereby making the capture of that place yet more difficult. It all depended on who was first in the river. Unfortunately Durrell waited in Halifax for reports to reach him that the river was clear of ice, and there Saunders, with the expedition, found him. Durrell was at once sent forward, but too late; the enemy's reinforcements, accompanied by a weak naval force, were before him, and he could not catch them.

The story of the capture of Quebec needs no recapitulation here, it is only necessary to say that the shifting of the British troops from place to place by water, which they were able to do, thanks to the co-operation of the fleet, brought out only too well the words of Raleigh I have before quoted, and it was due to this that Montcalm was checkmated. The French naval force and storeships had retired above Quebec, and the interposition of a British naval force between them and that city not only threatened them, but cut the line of communication by water, rendering the transport of provisions and stores by land necessary, a slow and arduous method. Still, it must be remembered that the French naval force was not destroyed; Saunders found it impossible to do so and co-operate with the Army to his fullest scope; thus winter found Quebec undoubtedly

captured, it is true, but no more. The junction with the expedition under Amherst in the west was not accomplished; Montreal lay between the two, and the passage of the river above Quebec was still barred by the French naval force. To destroy them entailed the use of boats, and it was too late, by the time Quebec fell, to accomplish it without jeopardising the clearing of the fleet from the ice-bound waters to pursue their duties elsewhere. So Saunders sailed, leaving a small force behind him under Captain Spry to watch the French as long as possible, that is until the last moment that the river was navigable.

So winter in all its rigour came with Quebec, occupied by the English troops, insufficiently housed and clothed, their strength gradually sapped by the ravages of scurvy; their enemy lying up the river, and in possession of its upper reaches; his small naval force frozen in and waiting.

April, of 1760, saw the hard-won citadel surrounded by the enemy with the French naval force under the cliffs, and a siege begun.

But England had not been inactive; in the early part of the year a squadron with storeships had been sent under Commodore Swanton to the relief of the beleaguered city, and in May it arrived, the siege was raised, and the French naval force, that had caused so much trouble, demolished. A squadron had again been left behind at Halifax for the winter, under Lord Colville, and another squadron sailed from England at about the same time as Swanton's, to destroy the fortifications of Louisbourg. With so strong a naval force, it is not surprising that the French convoy of stores and reinforcements, which had eluded the blockade on the French coast, fell an easy prey; the English were before them. The rest of the war in Canada was purely lake and land warfare, and Montreal fell to Amherst and Murray and the colony passed into our hands.

Had the stores reached the French before the British relieving force arrived, Quebec would have been captured; it was the want of stores that held De Levis's hand. The arrival of the British and the capture of the French storeships left only a concentration on Montreal feasible to him. But the French had accomplished a great task. For three years of vigorous warfare they had held Canada, with very little help from the Mother Country, solely because of the British inability to order safe passage. By assuming with their weaker fleets a defensive policy, they had for three years delayed their adversary, hoping against hope that a change of fortune in the war on the continent would bring them the much-needed relief. The mistake of Durrell in failing to order in its entirety the safe passage of the St. Lawrence in 1759, had the far-reaching effect of not only increasing the difficulty of the capture of Quebec and Montreal, but also of enabling the French to place the former after its capture in a position of grave jeopardy. Had that mistake been repeated in 1760, it seems quite possible to say that Wolfe's and Saunders's great achievement would have gone for nought.

One cannot study the story of this war without noticing how difficult it was to keep an effective blockade on the French ports; but it must be remembered that other purposes were in the wind, and also that, whereas the French were not always successful in getting their reliefs, stores, and fleets across the Atlantic, thanks to the inferiority of their numbers, we had no difficulty. They lost one golden opportunity in 1757, as I have before said, but it was their only opportunity, and it arose directly after and during a concentration of forces passing over a long distance, a point not to be forgotten where concentration at a distant place is under consideration, forcing as it does that concentration as an objective to the exclusion of all else in its performance.

The superiority of the British naval force was most marked at that time; indeed, without that superiority the energetic and successful pushing of the war in its various theatres would have been impossible; but even with so great a superiority it was not possible to give Holborn the needed overwhelming force to ensure the capture of Louisbourg in 1757. The efforts of French privateers to damage trade was responsible for a loss of one-tenth approximately of our seaborne commerce; but so vast was that commerce that it flourished and the French declined, as the numbers of the British victories accumulated and increased, so did trade; our credit was enhanced abroad, and so severe were our own depredations on French commerce, and so superior was our naval force, that although the French privateers did damage a tenth, our commerce prospered exceedingly. We had struck the French trade at the French colonial outputs, Canada, India, West Indies, and elsewhere, and with our increasing credit were left their masters in commerce. But it is, I submit, quite feasible to imagine that had the war been limited to Canada, our superiority of naval force would have prevented even the loss of that tenth. It appears to be in the minds of some writers that seaborne commerce and its protection should be delegated to a minor position in naval strategy; that the ordering of safe passage is not an essential to the sure and successful fulfilment of war; but I venture to affirm that in a country whose life-blood it is, such a view is not permissible; the failure to supply the people with bread will close a war, nay, more, the endangerment of that supply caused by pursuing a strategy that, however admirably planned, does not bring in a foremost place the protection of commerce, but relegates it to a minor position, will be sufficient to raise an outcry for "peace at any price" of such a strength as to upset the whole plan of the war, to enforce the protection of commerce at the expense of all besides, and, perhaps, bring through such cases an utter and degrading failure. To succeed in war the spirit of the nation must be in it.

We have seen in this war very clearly, first, that when France was enabled to place a superior naval force at Louisbourg, although she failed to attack and annihilate the expedition

against her, the capture of Louisbourg was not attempted. Secondly, that when she placed an inferior naval force at Louisbourg she was enabled to confine the operations to that place alone and delay conquest. Thirdly, that by placing a small naval force above Quebec, she was again enabled to confine the operations to that place and delay conquest; and, fourthly, by retaining the naval force in that position she was enabled to deliver a counter attack which was all but successful. In fact, by the interposing of a naval force between her enemies and their goal, in other words, by disputing safe passage, she preserved her colonies for a lengthy period, imposed great expensive efforts on her opponents, and not until the destruction of that interposed naval force, not until the safe passage was assured to Great Britain, did Canada fall.

But it must not be laid down that the mere interposition of a weaker naval force is all that is required; that interposition must be backed by favourable circumstances and by land forces, the action of Hood at St. Kitts in 1782 is a case in point, where, although he interposed a fleet inferior in strength to that of De Grasse, he did not succeed in relieving the besieged garrison at Brimstone Hill. On the morning of the 25th January, 1782, Hood's fleet of 22 sail was to windward of De Grasse and to the westward of Nevis. By steering a northerly course he succeeded in anchoring his fleet in the Roads off Basse Terre, with only opposition to his rear—an opposition not of long duration owing to the small distance to be traversed by them before anchoring in their assigned positions. In fact, the British van had already anchored before the French van were enabled to bring the British rear to action. The fleet was anchored in the windward, *i.e.*, the eastern part of the Roads in the form of the letter "L," lying on its side thus: "—," with its long head resting close in shore on the eastern or weather end of the bay, and the short tail resting about four miles to the S.S.E. of Basse Terre, which was in the hands of the French. In this position the attacks by the French fleet were successfully repulsed, and they retired to the south and watched. They could not get inside the "L," prevented from the eastward by shoals and lack of sea room between the shore and the van ships, and on the westward by the trade wind; and moreover, as they attacked from the south and east, to keep the weather side of the approach, and in single line ahead, by the time they reached that end they were too damaged to tack round it. They endeavoured by filing past in single line from east to west to make a gap, but entirely failed. Hood was thus in a position to windward, whereby he could fall on any store-ships sent to Brimstone Hill (which lies W.N.W. from his anchorage position), and should the French fleet go there, being in the weather position, he hoped to damage their ships in detail. The French attacked, as I said before, and were repulsed and retired; the reason seems to be that they knew their strength of 33 ships would enable them to reach Brimstone

Hill if necessary, and were fully assured that the fall of that place was inevitable. Hood could not weigh without every chance of defeat, and as long as he remained at anchor, the fall of Brimstone Hill was certain. It fell on the 12th of February, and on the night of the 14th Hood, without signal or noise, cut his cables and sailed to the north, unperceived by De Grasse, who was anchored off Nevis. With a force of 33 against 22, it seems strange that De Grasse did not boldly attempt the destruction of the British fleet, and his carelessness in not more closely watching them must be deemed inexcusable.

(1) Hood accomplished two things: First, he tempted the French fleet from their anchorage off Basse Terre; secondly, he prevented them anchoring there again during the operations against Brimstone Hill. His original intention was to fall on them at daybreak while they were at anchor and attack their windward vessels in detail, which was possible of accomplishment, as De Grasse's fleet were not anchored in any good order, and were lying in the leeward part of the Roads of Basse Terre. Hood was delayed during the night of the 23rd, and was sighted on the 24th at 1 p.m., when he rounded the south point of Nevis. De Grasse at once weighed, and that day and the next night were spent in manoeuvring, Hood drawing off De Grasse to the southward, but keeping to windward of him, until on the 25th he anchored as detailed. Had Hood a landing force to land at Brimstone Hill his object would be accomplished; but having none he did the only thing in his power by threatening safe passage. De Grasse, with overwhelming force, did not attempt to remove the power to molest his safe passage, but allowed it to slip through his hands, to feel its full weight when his enemy was reinforced by Rodney on 12th April of the same year, to be himself captured, thanks to the efforts of his former opponent Hood in the *Barfleur*—a fitting result of not obeying the fundamental rule for obtaining safe passage, namely, the destruction of that force which disputes it whenever and wherever it is possible—a rule fully realised by Suffren during the same war at the other side of the Globe. It was not through want of endeavour on Suffren's part in the East Indies that he was not successful, but rather to lack of efficiency of the *personnel* of those under him. He saw the necessity of opportunities of port, and his saving of the Cape of Good Hope by attacking the British at Porto Praya under Johnstone was his first act on the way out to the East. With no port under his lee in the Indian Seas he kept his fleet in order for fighting his stubborn opponent, and eventually by the seizure of Trincomalee from the British obtained his much-needed port. Peace put an end to his sea campaign just at its fulfilment, having practically relieved Cuddalore, Hughes leaving the disputed safe passage in his possession, and abandoning the British army, whose supply ships could not now again approach them. Peace saved them. Suffren had interposed his fleet, a weaker one by three sail, but he had severely

damaged Hughes' first. Hughes was at anchor off Cuddalore and weighed on sighting Suffren, who, first communicating with his besieged army and drawing therefrom men to fill vacancies in his ships, attacked from windward. The losses were nearly equal, but Hughes retired, and Suffren took his place off Cuddalore. Nine days after came the news of the conclusion of peace, much to the joy of the besieging British general, whose position was now barely tenable. Suffren realised that the safe passage meant the removal of the power to molest it; that removal he at last accomplished after four previous hard-fought actions, thanks greatly to the possession in his hands of Trincomalee and the weather gauge.

These are two occurrences out of many that took place during the great maritime war of 1778-83. Throughout the war the ordering of safe passage was contended with two different ideas by the British and the French. The former's main objective was always the destruction of her opponent's fleet; the latter's the seizure of ports without first destroying her opponent's sea force. The British idea was first to crush the power to molest safe passage; the French to seize the point at issue and then dispute the safe passage. Suffren, whose name as a great sea fighter will never die, was the one brilliant exception to the French idea. He saw the correctness of the rule to destroy the force that disputes the safe passage, and used all efforts to attain that desirable object by attacking his opponent's fleet whenever he could. He also saw the importance of opportunities of port, especially one where he could knock at his enemies' doors, and he successfully obtained them. That his success was not more assured and his victory not crowned was due to the stubbornness and fight of an opponent actuated by similar ideas and spirit, to whom all honour is due.

Suffren knew that to render aid to his besieged forces with his fleet he must first get rid of his enemy's ships, and in this he went quite against his country's usual policy. We in this country deride any other view, but in so deriding we should not forget that we have been brought up with no other idea; the destruction of the enemy's ships has been always the British objective. Not so with the French; even Napoleon planned his invasions oversea with small care for the ordering of safe passage, and although he did get across to Egypt in June, 1798, landing on the 1st July without ordering safe passage, it must be remembered that Nelson was without frigates, and at one time the opponents were only 60 miles apart. Napoleon's landing was effected, it is true, but he lost his convoying fleet of 13 sail in Aboukir Bay, where Nelson found them at last on 1st August. That Napoleon understood what it meant to him there can be no doubt, if only the remark on hearing of the disaster to his fleet be quoted:—"We have, then, laid on us the obligation to do great things. Seas which we do not command separate us from home; but no seas divide us from Africa and Asia" (Mahan's "Influence of Sea Power on the French Revolution," Vol. I., p. 277).

That the expedition would have been found at sea, and destroyed, or at any rate prevented, we may assume as most probable, if only Nelson had had his frigates—the eyes of the fleet. By constant search and zealous ardour he did eventually find them and destroy them, and cut off thereby the French Army of occupation—an army that had been in occupation one month. How long does an army of invasion require to bring a country to its knees, seems to be a most important question, and one almost impossible to answer. The answer can only be accurately given when such things come to pass, and it is the duty of the fleet, so far as this island is concerned, to see that they do not come to pass, and to accomplish that duty the fleet must be adequate.

Napoleon's disregard of the vital importance of obtaining and holding the ordering of safe passage was England's greatest safety in the days of the "great terror." He aimed at holding the Channel for a few days; later for a few weeks; but never to definitely order safe passage across it, obtainable only by the destruction of Britain's floating force.

The concentration of his fleets was never consummated, not because at the last Napoleon did not see the necessity of it, if only for a short time, but because he did not grasp, and never, during his power, did grasp the full meaning of, and requirements for, naval strength. His island opponents had always understood it, and surrendered all objects to it. The naval strength of Great Britain, imperilled repeatedly by narrow-minded politicians in peace, assumed in war always its true and imperative importance to the success of any military undertaking.

That the great war between Great Britain and France had on its naval side this great principal object, is, I think, made clear to anyone who studies the naval history of 1798 to 1812, the period of Napoleon's power and during which Nelson achieved his fame. The continual defeats of the French fleets at the commencement of the period left the British Navy in such ascendancy that her ordering of safe passage was assured, and assured to such an enormous extent that she could dictate the course of commerce to all the world. Napoleon's great endeavours to ruin her through her commerce after his final renunciation of crushing her by invasion, was doomed to failure purely through the British ordering safe passage.

Most clearly is this shown in Mahan's work, "Influence of Sea Power on the French Revolution," Chapters XVII. and XVIII. With a naval force weakened, and whose ruin was consummated by Nelson at Trafalgar, the French naval efforts were confined to commerce destruction. Privateers of all sizes abounded. Not that before 1805 the destruction of commerce had not been indulged in, but, thanks to the vast naval strength of England, we find as late as 1800 the total amount of damage to be only one-fortieth. After Trafalgar Napoleon's efforts against commerce were redoubled, and not confined to the mere

destruction of commerce carriers, but a vast scheme to ruin the trade of Great Britain entered into. Holding all Europe, either by conquest or alliance, British goods were debarred from that market by the French.

Holding the ordering of safe passage, Britain forbade the exportation of goods by sea to and from Europe, except they came through her as middleman—so that goods carried by neutrals into and out of Europe, had to pay toll. Napoleon's more stringent orders to treat all imported goods oversea as British, broke the back of the great French Empire. It was a case of endurance, and at the end the Empire succumbed. Cut off and isolated by the British ordering of safe passage, the huge fabric caved in, leaving Great Britain all but ruined, and France quite so. Surely this English power to override the seas, to enforce the use of Great Britain as a house of call for neutral traders, to prevent a single enemy's merchant vessel sailing with safety, to constantly patrol the main routes, and blockade French ports, is to order safe passage, and if so, surely the ordering of safe passage is the command of the sea. We can see Napoleon crossing to Egypt with his invading force weakly convoyed, and after a month of investment, finding his retreat, his source of succour and refreshment, cut off by the ubiquitous sea power of his enemies, and later, having learnt his lesson, we see him with his army of invasion at Boulogne impatiently waiting for his fleet to seize the Channel and make his passage possible across it, only to give up all hope of his object with the retirement of Villeneuve to Cadiz, and his defeat directly after at Trafalgar, to piroquette, as he termed it, his army of invasion, and with it strike Austria, thenceforward endeavouring, by means which reverted on his own head, to exhaust his enemy by closing the market of Europe to her commerce. Russia could not stand the strain; Spain could not stand the strain; his enemy gained a footing in Portugal, and the East and West markets of Europe were thrown open again to trade—a deliverance made possible by sea power and sea commerce, a power that had taken from him his colonial possessions and eaten up his oversea trade. With a shrunken treasury, a rebellious empire, and a divided one, how could he help but fail? But in his downfall he drained his enemy. Her vast resources were stretched almost to the breaking point, and she was forced into war with the one successful neutral, the United States. That Great Britain endured is due to her national characteristic of stubbornness, and her ordering of safe passage. Until the United States challenged her dictatorship of the sea, there was no one who could stand against her.

England's dictatorship and impressment of seamen sailing under the American flag was the cause of the war of 1812. Her forbidding the United States to trade direct with Europe, whereby she levied toll as middleman, and so lessened the American gain, and her insistence that, as all her seamen were required for the service of her country, she would not permit the American

flag on the high seas to protect them, eventually brought on the war. Purely commercial reasons. Without the seamen Great Britain could not man her Navy, on which she depended; unless she took the part of middleman she could not provide the money to keep the war going in Europe. Believing, as she had every reason to believe, that the United States would not fight, but continue arguing the matter in dispute, she stuck to her policy, and it is curious to note that through the procrastination of the United States and their wish for peace, they did not show their teeth until just before the downfall of Napoleon, and the release by the re-opening of the oversea market to Great Britain, caused by the Spanish, Swedish, and Russian revolt against the Napoleonic yoke. It is quite true, of course, that Napoleon's repulse in Russia was unsuspected, and that when it occurred war was in full swing, notwithstanding England's repeal of the Orders in Council directly America declared war, in the hope of averting it, her refusal to desist from the impressment of her seamen on board American vessels was sufficient to keep the United States' sword drawn.

Even with Great Britain's hands tied by the necessity of maintaining large naval forces in European waters at the commencement of the war in 1812, the United States naval strength was not superior to that which her enemy placed in Western waters, and this fact led in the United States to those old differences of opinion that are not even yet quieted, namely, that as the only method left of disputing safe passage was commerce destruction and the vital necessity of protecting her own, whether it were best to disperse her fleet broadcast over the waters, harrying commercial routes singly or in pairs, striking at all possible points at unknown and surprising moments, or to concentrate her small force and thereby force her enemy to concentrate his and draw him off from her own commercial routes, thereby ensuring the safety of her homeward bound vessels, of which at the commencement of the war there were many numbers, and whom it was most essential to get hold of, not only for the sake of their cargoes, but so that they could be retained in their own ports until a favourable opportunity occurred to sail again in comparative safety.

The United States decided to follow the middle plan, viz., to send two squadrons, one to cruise off the Chesapeake and the other off New York, apparently with a view to protect the returning merchantmen by meeting them off their ports—a method of defence, as "Mahan" points out, that cannot compare with one that diverts the enemy's attention from those ports. Supposing, for instance, this plan had been followed, the British concentrated superior strength would only have to meet and defeat them in detail, and even if they combined before the British could meet them, they were still in inferiority, and the disputation of safe passage would have been settled for the United States at one blow, leaving her enemy free to capture her trade and blockade her ports. There can surely be no

doubt that the American merchantmen's safety lay in the absence of British naval force, not in the presence of her own; but Rodgers, who was a strong upholder of the second plan, had got to sea with his fleet before the orders could reach him. That his ideas were correct and sound strategy the events, at any rate, proved.

Great Britain's method of preserving her commerce carriers was to forbid them sailing without convoy, so that had the first plan been put into force at the beginning, only isolated ships would have been captured.

Rodgers also wished to strike at British trade off the European coast, his idea being that he would be hidden at sea and worry his enemy, that the withdrawal of his fleet from off American waters would draw the British fleet off too, and thus ensure safety to the returning merchantmen, and that his force would be strong enough of itself to capture any convoy that might be sailing. He knew that the American naval struggle against such overwhelming odds, unless France assisted with her broken fleets, could not be for long, but he desired to protract it as much as possible, doing as much damage as he could during the period, and obtaining better terms for peace thereby.

With her small naval strength, the United States had only one programme possible: afloat to dispute safe passage by destroying commerce, and to the utmost of her ability protect that of her own which was at sea; on shore, to use her great numerical strength of land forces by invading Canada. No other military action was clearly possible.

Rodgers put to sea with his squadron in chase of a convoy from Jamaica, which he never found, going as far as the longitude of 11° W. on a course for the English Channel, and thence down to the south, sighting Madeira, and home to the south of and sighting the Azores, capturing a few merchantmen—not a great record for a long cruise, but its effect on the enemy was far-reaching. Rodgers had sighted shortly after sailing and chased a British frigate, the *Belvidera*, which got safely away to Halifax, so that his squadron's sailing, though not the United States total naval strength was known to the British admiral, and had the following effect: postponed the blockading of the ports for fear of the blockading ships being overwhelmed by Rodgers' return, for who could tell when and where he would return, made impossible the blockading of the United States naval force, and watching commercial ports by single frigates, because a great part of that force was already at sea, and finally forcing a British squadron to accompany a convoy from Jamaica 500 miles into the Atlantic, instead of seizing the American returning shipping. It is of no use to say that had the British forces been otherwise employed they would have been more successful, or that had better information as to the declaration of war been in the hands of the English, and so forth, these results would not have been adduced; the fact remains that

Rodgers' effort did produce these results, and Maddison was able to report "our trade, with little exception, has reached our ports." Truly another excellent example of "a weaker fleet doing something if used with intelligence" successfully, if only for a short time, disputing the ordering of safe passage. It is not contended that this successful disputing by the weaker force is going to last for any great length of time, but it retards victory, assists in exhausting the enemy, damages him, and very often leads to better terms of peace. Wherever water is used for communications in war, the ordering of safe passage of that water is essential for its sure transit. Inland waters as well as the sea demand this. The compulsory use of the great lakes of America for communication by both belligerents—a compulsion caused by the nature of the surrounding country—gives an excellent example, not only of this maxim, but also as showing to what a tremendous radius the ordering of the safe passage of such waters makes itself felt.

For it must be remembered that these lakes, with the River St. Lawrence, were the real frontier line between the United States and Canada, and that the line of advance and retreat on the British part was along the lakes. The Americans could advance and retreat from and to the lakes from the interior, but not so the British, as a glance at the map shows.

Thus the ordering of safe passage was imperative for the British communications and forces. Their army had to move by water from the St. Lawrence. The United States, on the other hand, impinged on selected points on the lakes from the south. When war broke out, Great Britain had a naval force on the lakes, and was thus in a position of superiority, in so far as the movements of troops and stores went, though far inferior numerically in her land forces. The Americans bought and built ships, and as their stores could reach them from their depôts in the south without traversing the lakes as the British had, greater rapidity of construction was assured them, of which they took excellent advantage, obtaining a superiority in 1813, which, after one action, gave them the ordering of safe passage of Lake Erie, and this, apart altogether from actual military successes, caused the desertion of the British Red Indian allies in the north-west, and gave to the Americans the control of the Niagara frontier between Lakes Ontario and Erie, a control that they lost at the end of the year in a misdirected attempt on Montreal; lost also because the ordering of safe passage on Lake Ontario was not secured by Chauncey, but left in dispute, and eventually at the end of the year not even disputed, as his fleet were required to protect the rear of the American Army on its way down the St. Lawrence, by acting at the junction of that river with the lake. The British were thus enabled to safely despatch a reinforcement and capture positions at the west end of the lake. Chauncey having, before lying up for winter, removed a large part of that force by water to the east, to take the place of the

SECOND PRIZE ESSAY.

troops, removed from Sackett's for the futile attempt on Montreal. It must be remembered that in those regions transport by land was more possible in winter months, and that the water transit did not exist, then, because of the ice. Thus the Americans should have pressed home their attack on Kingston when in possession of superior naval force in the summer, and at any rate not have left the ordering of safe passage in dispute by dallying with an attempt on the St. Lawrence at the end of the year. They lost the Niagara position, which had been won for them solely by the "ordering of safe passage" of Lake Erie. With Kingston in their hands, obtained by naval and military superiority on Lake Ontario, the winter would have found the Lake frontier in their possession; but first and foremost it was necessary to order safe passage on that Lake directly Chauncey had force to successfully dispute it, which was at the beginning of 1813, and not to spend a weary time manœuvring for an impossible favourable position for his fleet made impossible for every ship because of their heterogenous character. It is not too much to say that, had the American Ontario fleet been used with the same decision as that on Lake Erie, winter would have found the Lake frontier in the hands of the Americans, and the British retired on the St. Lawrence.

After the winter of 1813, the Americans made a great effort to regain the Niagara peninsula, which demanded for its success the co-operation of Chauncey's prepondering fleet—a co-operation not granted by him until too late; in fact, he allowed himself to be blockaded at Sackett's Harbour by the weaker British, who thus were able to transport reinforcements, and hold the Niagara position. By the bold cutting out of some American ships (four in all) on Lake Erie, the ordering of safe passage there was again disputed, the result at the end of the year being the withdrawal of the Americans and their cessation of offensive action on the Lakes. At the end of the year the British again had a superiority of naval force on Lake Ontario, by the completion of a large vessel of 102 guns. Whilst, in 1814, these matters were in progress on the great lakes, it was decided by the British to obtain the control of Lake Champlain, which threatened Montreal from the south by the destruction of its naval establishments and fleet at Plattsburg. Troops sent from Europe were used for this purpose, and a combined movement against Plattsburg, off which the American fleet were anchored, was initiated. Unfortunately, the land forces did not, as was intended and promised, participate in a simultaneous attack, and the British fleet was defeated, whereupon the army retired into Canada. In the words of the Duke of Wellington, when asked to take command of the army in America:—"The question is, whether we can obtain this naval superiority on the lakes. If we cannot, I shall do you but little good in America" (Mahan's "Influence of Sea Power in the War of 1812," Vol. II., p. 430). The ordering of safe passage of the lakes controlled the situation as regards the territorial incursions of Great Britain; and the

defensive policy pursued by her throughout the whole war on the frontier was forced upon her, because, together with the numerical inferiority of her land forces, she could not obtain and keep the ordering of safe passage of these lakes; they were continually in dispute. America's invasion was checked for precisely the same reason, she never in entirety ordered safe passage through the lakes.

On the sea the weakness of the United States fleet, numbering but a score of pennants, imposed on them the unsatisfactory object of commerce destruction by ships independent of each other. The British blockade of the American coast rendered their efforts to accomplish this spasmodic, and wide as they ranged, one, if not two, going as far as the North Sea, their reward was small, the convoy laws being strictly enforced—the damage done was immaterial. The one ship, the *Chesapeake*, that was detailed to capture stores and reinforcements at the mouth of the St. Lawrence, falling a prey to the *Shannon* in an historic duel. The United States had their commerce completely ruined, and in 1814, after Napoleon's fall, and when Britain could, in consequence, spare more force, the ordering of safe passage was entirely in her hands. Peace was declared, and this most unpopular war ceased in the beginning of 1815.

The Japanese and Chinese War, of 1894, forms an illustration again of the "ordering of safe passage." True, armies were landed in Korea before it was obtained, but the fall of Port Arthur and Wei-Hai-Wei was entirely due to the defeat inflicted on the Chinese fleet at the Battle of the Yalu—a victory which, by the retirement of the remains of the Chinese fleet to Wei-Hai-Wei gave the Japanese the "ordering of safe passage." The two ports were blockaded, and the Chinese merchant ships did not appear in the Gulf of Pechili. The Chinese commerce carriers were unable to use that sea. For obvious reasons the commercial blockade on Chinese ports was not upheld by the Japanese, as we enforced it in the war of 1812, on the ports of the United States, so that the trade of China through neutrals did not really suffer. It should be noted that, although the Japanese Army, for the campaign in Korea, was landed before the Battle of the Yalu, the army for work in China proper, Port Arthur, and Wei-Hai-Wei, was not sent until after that battle, which gave Japanese the ordering of safe passage. The quarrel was over Korea, and the bad means of transport through Manchuria made it necessary for the Chinese to use the sea, if possible, for transporting troops, and granted that their Army and Navy were inferior in *personnel, matériel, and training*, nevertheless this war possesses the same fundamental principles of ordering of safe passage as all its predecessors before the invention of steam, torpedoes, and armour. China, by losing the ordering of safe passage, was unable to throw a sufficient quantity of troops into Korea, and had to wait on the defensive for the development of any Japanese attack on her coasts; unable to bring to that point

reinforcements over the sea; nay, more, unable to meet the invaders on the sea, to realise in very truth Raleigh's words:—

"There is no man so ignorant that ships, without putting themselves out of breath, will easily outrun the soldiers that coast them."

The Spanish-American War rested completely on the ordering of safe passage. Without it neither belligerent could conquer Cuba, the point of dissension. The complete blockade of Cervera inside Santiago enabled the United States to send their Army over under Shafter; a report that some Spanish ships were out was quite sufficient to delay the army's departure, however, and it was not until its falseness was proved that Shafter moved. The annihilation of the Spanish fleet ended the war. Short and of small account as that war was in comparison with others of more gigantic nature, undertaken by countries possessing considerably greater forces, nevertheless it was illustrative from first to last of the undying principles of "ordering safe passage." Unseemly panic for the defence of their undefended coastline was observable in both countries; the measures taken by America to allay the public clamour by the institution of a "Flying Squadron," caused by its nomenclature a like panic in Spain, and she did not send, in consequence, a fleet as strong as she might have under Cervera. His fleet was so poor in *materiel* and *personnel* that it simply exerted its energies in reaching the shelter of Santiago. Forced eventually to leave that shelter and ignominiously perish without having struck a blow for its country, thanks to that country's utter unpreparedness for war. Meagre as the action of Spain in regard to her naval forces was, nevertheless the lesson is plain, and the strategy of the United States correct. The latter's object was limited: the capture of Cuba, and, incidentally, for the purpose of destroying the Spanish naval power in the East, that of the Philippines. For that purpose she ordered the safe passage of her troops to Cuba by blockading the Spanish fleet in Santiago, and destroying it when it came out with superior naval force, and also in the East, by the same weapon, destroyed the Spanish fleet in Manila and seized the Philippines. No Spanish reinforcements could reach Cuba without falling into the jaws of the American fleet, so Spain paid her bill as all nations must who suffer the deterioration of their military weapons. One great lesson, at any rate, from this war we may well lay to heart, namely, that ignorance of the true functions of a fleet by the people lead to the unfair handicapping of the executive. To have to withdraw ships from their true positions and duties to allay the fear of a nation is not an act, however made necessary, that can call for commendation. The cleverness of the American executive, which, by the nomenclature of those ships, not only allayed the fears of their citizens, but placed a like fear in the breast of her enemy, is worthy of the highest praise; but it must always be a matter of deep regret to

that great nation that such a strategic fallacy was necessary; she was unable thereby, when every fighting keel was wanted, to immediately place them in their totality in those positions which were imperative to obtain the ordering of safe passage, thus laying herself open to a blow most derogative to her well-earned prestige.

A rapid glance at that last great struggle in the Far East, between Russia and Japan, will, I hope, also demonstrate that to-day the principles of ordering safe passage are the same as they were in the days of yore. Modern weapons used on the sea and under the sea have altered the actual characteristics of fighting, but not those principles. In so far as the ordering of safe passage in the late war is concerned, we can divide it into three distinct phases, each of which was consummated by the eternal rules taught by history and demonstrated to their full by a young ambitious country, too wise to throw overboard their evertrue and ancient teachings.

To drive the Russians from Manchuria, Japan, as in her war with China, had to use the sea, but Russia threw her forces into the area of action by Manchuria, just as China was forced to do, but through a modernised Manchuria since that time, with a good railroad and well-organised matériel. Japan started in the same way as with China—the throwing of a large army into the disputed country secretly and suddenly—and it is well here to remark that if a country allows itself to be thus surprised, no power to order safe passage can prevent such an act, though it does prevent the supplying and reinforcements necessary to its success afterwards.

The further removed from that country, the "terrain" of that act, the more easy of accomplishment is the surprise.

Having attacked the ships at Port Arthur, and sunk the isolated ships at Chemulpho, the Japanese fleet watched the Russian fleet at Port Arthur and placed cruisers to guard the Tsu-shima Strait against the Vladivostok squadron.

With the exception of their disastrous sortie on 10th August, the Port Arthur squadron was contained. The Vladivostok force only once disputed the safe passage, and were severely dealt with in consequence. Japan, more through the incapacity of her enemy than her own efforts, thus held the ordering of safe passage, and we may call this first phase the containing phase; but in Libau were getting ready the rest of the Russian fleet, which, if added to the Eastern squadrons, would be of overwhelming force, reduced though these squadrons had become. It was evident that now in an inferiority, the Port Arthur fleet would not wish to risk action if they could hold out for the arrival of the relieving force; so Port Arthur was blocked, or an attempt made to do so, and violently assaulted, and the ships shelled from shore; the idea was the destruction of the fleet, always the fleet, with what gigantic success we all know. This was the second phase, we can call it the blockade phase.

Having destroyed the Port Arthur fleet, crippled the Vladivostok fleet, and mined the entrance of that port, Japan awaited Rojéstvensky with a fleet almost intact, and by a splendid scouting system met it and annihilated it. The third and final phase, obtaining complete ordering of safe passage. The war is too recent to coldly criticise it here, but it is obvious to any who can study it that every principle of obtaining the ordering of safe passage was thrown overboard, not by the younger but by the older world Power.

The great rule, that to order safe passage you must destroy the power to molest it, was amply fulfilled; here was no seizing of ports and disputing safe passage afterwards; here was no invasion of a country with the ordering of safe passage cast aside and neglected; here was no leaving the lines of passage to dally with distant objectives; here was no remitting of constant watchfulness on the enemy; here was true mobility that emerges triumphant from actions fought at constant high speed. Japan has risen to the height of a great naval nation, not so much because of the glories reaped in the war as because she showed that her methods, patiently performed, bore the mark of study and full knowledge of the eternal principles of naval war.

CONCLUSION.

Having thus far too briefly touched on a few wars and endeavoured to extract therefrom examples which go to prove my definition to be correct, let us see if it is not possible to unravel from amongst these numerous strands of circumstances the distinguishing yarn that runs through each rope; and I would here remark that the wars selected for this paper have not been specially chosen, but were merely taken because they were the ones to which the writer had easy access. I make so bold as to say that there is no war in which for its promulgation one or both belligerents have had to use the sea, in which examples of the necessity for obtaining the "ordering of safe passage" do not abound. No matter if the country possessing it was defeated, it was always an asset always on the credit side of the account.

No war ends on the sea. The actual final and concluding stage of war is on shore, and it is because of this that the pro-curement of "ordering safe passage" is a necessity to us and to all island Powers.

To obtain safe passage it is imperative to destroy the power to molest it, but this does not mean that in war that only is the duty of the fleet. Strategical reasons occur which make it necessary for the sure fulfilment of the main plan, to leave the ordering of safe passage in dispute for a time, to concentrate the naval effort on some other object, always, however, to return to that for which the Navy exists. We have had, for instance, to withdraw our fleet altogether from the Mediterranean, but only to return later and obtain the safe passage of

our vessels there. Again, the plan of the war may leave the obtaining of it quite out of the area of operations; as, for instance, in the Russo-Turkish war, when Turkey in no way disputed safe passage. Had she done so, and her naval strength should have assured her success, who can doubt that the landing in and occupation of the Dobrvdja would not have been a movement that would have rendered the Russian advance a much more arduous undertaking than it was. We have in late years a glaring example of the impotence of naval strength in not disputing it when there was no other object aimed at. To lie perdu under the frowning guns of a besieged fortress in the hope that there is to be found safety until it pleases Dame Fortune or an implacable adversary to allow you to issue forth to join hands with reinforcements, and thereby crush with overwhelming force that adversary is a hopelessly inaccurate way of viewing the duties of a fleet. Even if Port Arthur had been impregnable, was it satisfying to allow the enemy to continue to pour troops at will into the disputed area until the appearance of Rojéstvenski, without any attempt to cripple the adversaries he had to meet? If so, why was the Russian fleet in the East at all? The inaction of the Russian fleet in the Far East was an acceptance without a struggle of the position of inferiority, a surrender without fighting of all hope for a successful issue. The sortie of 10th August is significant in its tactics of that acceptance—an acceptance which entirely blights any hope of injuring the enemy.

To order safe passage by the destruction of those forces which molest it, is and always has been the primary object of the fleet. It is the true defence of commerce; and that it is at the present day so considered, the report of the Committee under the Chairmanship of Mr. Austen Chamberlain, on the subject of a national guarantee for the war risks of shipping proves. "In our opinion," they say, "we are unable to recommend the adoption of any form of national guarantee against the war risks of shipping and maritime trade except that which is provided by the maintenance of a strong Navy." Again: "We think that, assuming the maintenance of an *adequate naval force*, there is little danger of British shipping being laid up on any large scale, at any rate, for any long period." Adequate for what? To "order safe passage," to crush the force to molest it; and as this force is to be so adequate that shipping runs only the danger of being laid up for a short time at most, it must be overwhelming. The destruction of commerce cannot be disregarded, at any rate, as a secondary measure of attack, and, indeed, under certain conditions, of defence. This method of naval warfare has been used as the primary object by inferior fleets constantly through history. As I have stated, Napoleon reverted to it; America reverted to it; the Dutch used it; every nation at war more or less uses it. But as a primary objective it has up to the present time been a sign of the inferior naval force. It is one of a Navy's most difficult duties to defend

commerce, for it means numbers. The defence is only complete when the commerce destroyers are crushed.

Mr. Corbett, in his excellent work, "England in the Seven Years' War," Vol. I., p. 60, tells us that Lord Grenville designated commerce destruction as "vexing your neighbours for a little muck," and the gifted author asks : "Is this the last word on commerce destroying?" I do not think it can be, when by the destruction of that commerce a nation can be so vitally hit as ours can; it must always be a great temptation to the enemy to use that method of striking us. We know that France attempted it in the very next year, as also did America, not only in the war of 1812 but in their own Civil War, and we are in a position where, if commerce destruction is successfully used against us, we shall not find it possible to exist. Our ordering of safe passage must be complete—a completion only obtained by the crushing of the power to molest it. I am quite aware that a vast amount of commerce destruction in the previous wars quoted was accomplished by privateers, first used by Holland against us in 1275, I believe, but a weapon that cannot now be used; but for what reason are the fastest merchant ships heavily subsidised by Governments? Is it only as scouting cruisers? Is it only for that that a present friendly State pays an enormous subsidy that her mail steamers are able in their construction and speed to challenge the world and surpass the majority? Is it only for scouting that *Chateau Renaults* were built? I think not. True, Great Britain has pursued her oversea commerce in war as well as in peace, trusting to the superiority of her Navy for its safe passage, and the report of Mr. Austen Chamberlain's Committee, together with the refusal of Great Britain at the last Hague Conference to entertain the immunities of enemy's private property at sea except as designated in the Treaty of Paris—a refusal which is only a continuance of what has always been her policy—are happy auguries of the nation's intention to preserve an adequate naval force.

Our oversea commerce is so enormous that provided our Navy is adequate its destruction is impossible; they rest each upon the other for their existence. And while on this subject of commerce, let me for a brief moment reiterate that the showing of the flag in armed vessels in distant parts of the globe where we have commercial relations is beneficial to that commerce, provided it does not interfere with strategic dispositions of the fleets for its function of fighting, and is therefore an argument for numerical strength of the Navy. It is a pity that the Press should give an utterly false reason to the public for the necessary withdrawal of our small vessels from performing that service. To state as has been done that these vessels, whose duty was admittedly to show the flag and its authority, were useless because their fighting strength was not equal to that of foreign vessels belonging to the countries contiguous to or in which the flag was shown is false, and must be so. As well argue that the sentry outside a Government residence cannot handle a

mob and should therefore be withdrawn. He is only like the vessels we have withdrawn—a symbol of authority and force. Without his or their presence as a reminder of the authority at his back or their back, that authority decreases. No, let us be honest and admit that with the vast increase of the naval forces of other countries we cannot spare the men or the money to show the flag in distant parts of the world without weakening our strategic dispositions, great even though was the benefit to commerce that accrued from showing it—a benefit the loss of which has and is felt. Also let us not forget that the commercial prosperity of this country and the strength of her naval forces are irrevocably wedded.

Our country has always before it the fear of invasion; the attempts on our island have been numerous since the days of the successful invasion of William the Conqueror, as for instance the threatened German invasion of 1535 in the days of universal service, when, according to "Froude," King Henry VIII. reviewed the troops of London mustered for defence, headed by the Lord Mayor in white armour armed with a steel mace. The Elizabethan days saw the commencement of long-distance oversea commerce, and ability of ships to keep the sea, and is the acknowledged commencement of the area of the use of naval force as a preventive to the invasion of our island. And the more this preventive factor has been considered, improved, and enlarged, so more necessary has the ordering of safe passage, for the prevention on the one hand, and ensurance on the other, of successful invasion, made itself felt. As rapidity of transit across the sea increases, thereby bringing closer to each other belligerent States, so more difficult does this ordering on the part of the defenders become. Always, however, must it be remembered that though a mistake can seldom be rectified nowadays during the crossing of the invading force, because time does not admit, yet, unless that invading force has the ordering of safe passage after they are landed, they can be cut off from supplies and reinforcements, as Napoleon was in Egypt, and provided that the force is not too large and meets on shore a stubborn resistance, to overcome which reinforcements are a necessity, then that cutting off is sufficient eventually to defeat the invasion, but to do so requires the defenders ordering of safe passage, obtained by the destruction of all force that molests it, and adequate resistance in the invaded country.

Again, although by the display of superior force invasion may be obtained, unless that superior force crushes its enemy first, invasion has been over an undisputed sea, that at any time may become disputed, and by good fortune the resources and reinforcements cut off. So that to ensure certain success for invasion it is obvious that the ordering of safe passage must be obtained.

History teaches us that where large invasions oversea have been pursued, the invading country has always had the ordering of safe passage for its reinforcements, and thus if defeated,

has had the sea to fall back upon—the retreat assured. The obtaining of safe passage by the watching off an enemy's port with a superior force is, as I said before, not so satisfactory, nor does it give so sure an ordering of safe passage; it is not possible to prevent in unpropitious conditions of weather, the escape of the enemy, and once clear of the watching ships, time is required to find and bring him to action. We cannot put the inaction of the Port Arthur and Vladivostok fleets in the late war to tightness of blockade. The reason of the inactivity of those fleets need not enter here; whatever it is professed to be, it undoubtedly will not hold water with the recognised solutions of naval problems. But the blockading or watching of enemy's fleets is necessary if they cannot be brought to action at sea, to ensure the knowledge of their whereabouts, and to defeat them when they come out, if possible, just as the wind-battered, wave-tossed, weather-worn ships of our great forbears literally smashed the new-fitted, faster, and finer vessels manned by their harbour-drilled opponents directly they ventured forth to give battle, handicapped before weighing anchor by the knowledge that those they were going to meet had, through the bitter experience of constantly keeping the sea, a full, practical, and personal intimacy with the elements to them so strange. Thus will it ever be; no amount of study can possibly equal the hard facts of personal experience, and surely no argument is greater for the continuance of sending the budding seaman to sea at an early age. It is the *personnel* who win the battle—a practical *personnel* conversant with the *materiel* and elements which they use.

Nations do not, as a rule, wait for the ordering of safe passage to strike the first blow of invasion, but they must possess it to continue the operations, and so Japan, having landed her first armies and struck at the Port Arthur ships, proceeded to blockade in the modern sense that port, so as to ensure her safe transits, to order safe passage, for her reinforcements, stores, and necessaries, to continue the campaign.

It is a well-known procedure, and can be traced in many cases in history, firstly, the landing, and then the blockade of the enemy's forces. For whatever purpose the ordering of safe passage is necessary, the answer to the problem of how to obtain it, is the crushing of the power to molest it—that is, the enemy's naval force—for even in the case where the true objective is the transports, it comes round to the enemy's fleet, as I have shown.

When the naval forces of the enemy are crushed, leaving us still in possession of naval force, then do we, in its entirety, "order safe passage of our vessels across the sea"; then, and then only, do we Command the Sea, and the Empire endure. Here is the distinguishing yarn of the rope, the crushing of the enemy's naval force—nothing less gives the "Command of the Sea."

THEIR RESPECTIVE ADVANTAGES
AND DISADVANTAGES.

By Colonel W. WATTS, C.B., 3rd Bn. Welsh Regiment.

On Wednesday, 10th February, 1909.

Colonel The Viscount HARDINGE, 6th Bn. the Rifle Brigade,
in the Chair.

THE 15th of January, 1908, is a day to be impressed on the minds of Englishmen, interested in their national defences, for better or for worse, having been the date fixed as the first stroke in the decease of the Militia, in that recruiting ceased on the above-named date for the old Constitutional Force of the United Kingdom, and its substitute, the "Special Reserve Service," was introduced.

Therefore, generally speaking, with the last day of 1908, we may consider, comes the proclamation of the lingering death of the Militia, and consequently the first day of the New Year announces the birth and creation of the force with its altered conditions, now known as the Special Reserve, full of hope and aspiration.

With the former will die practically many of the time-honoured traditions and customs of that Service, but theoretically they will live as being the only workable fundamental principles of the basis and foundation of the second line or reserve of our Regular Army. Indeed, the Special Reserve may justly be considered the stepchild of the Militia, inasmuch as 80 per cent., of all ranks, of the latter transferred to the former.

To contrast the new versus the old, or in other words, the future against the past, is a very difficult and speculative matter, as in the former it is only possible to predict, by imagination, what may be in store in the course of time, while it is feasible to speak with experience and without hesitation of what has happened in previous years.

Therefore it might be with advantage to look back on the Militia and its career during the past thirty years.

Take the periods of 1875, 1885, 1895, and 1905, with intervals of ten years between each date :—

1875. We find the various counties and large centres furnishing their respective units, either in artillery brigades (engineer corps after 1881) or infantry battalions, purely territorial and local as regards both officers and men, each bearing local and honoured titles, invariably up to their established strength, and throughout the year entirely under the command, control, and supervision, of their own respective commanding officers, with his adjutant and quartermaster from a line battalion or departmental corps.

The units trained, as a rule, at the county towns, and were called up in each year at a specified time; consequently all ranks were in a position to arrange for their attendance, and not interfere with their various vocations of life, the result being that regiments were well known throughout the locality and recruiting area. But, what was more, the training was looked forward to with pleasure and interest, not only by the men themselves but also by their civilian friends.

The recruits, having been enlisted at any time of the year, were summoned for preliminary drill of six weeks before the regiment proper (or "old hands," as they were commonly called) assembled.

One great advantage of this system was that the Commanding Officer always had access to his recruits' work, and thereby had an active knowledge of their progress. The recruiting in those days was brisk, being carried on in rather a demonstrative fashion, which was undoubtedly popular, the regimental band being often present in towns on market days, and the drums and fifes attending country fairs, assisting the recruiting sergeants with their inspiriting efforts; and then it was that the love for soldiering stimulated the young rustics and city adults to don the colours and take the Queen's shilling.

A great disadvantage at the early part of this period was that the men were located in billets throughout the towns, thereby rendering a difficulty for the company officers to be in touch with their men, and discipline consequently suffered to some extent. Later on, the billeting was discontinued, and regimental camps instituted, which proved in every way satisfactory to the well-being of the Service. Another defect was that although the men were taught the preliminary stages of musketry, yet very little attempt was made to further any practical results from it by target practice, probably from the fact that there were no suitable ranges available, rather than from any other reason.

1885. A lapse of ten years. By this time quite a new scene had come over the old Constitutional Force. The corps and battalions had ceased to exist as local self-containing and maintaining units, and had been amalgamated with the line regiments associated with the county or district, and taking the

titles of same, and thereby losing their own traditions, which had been so long cherished, valued, and honoured.

Recruits (except in the case of a few corps) were sent immediately on enlistment to the dépôt barracks for the preliminary drill.

From this period it may be said that the Militia as a distinctive Service began to decay, and became a mere recruiting machine for the Regular Army.

Interest began to wane in the immediate locality; the new system of recruiting was not popular with the men, and no one disliked it more than the employer of labour, who, under these conditions, never knew when a man might leave his service without notice or warning, in order to enlist.

The agricultural depression had taken a firm hold on the country districts; consequently there was an exodus of the young men, who rushed to the towns for work. This made the rural districts totally unable to supply any recruits, which naturally had its disastrous effect on the battalions entirely composed of the tillers of the soil.

Also, the "bringing in recruit" fee had been abolished, with adverse consequences.

During this period, the Militia Reserve, a force destined afterwards to play its part, was raised. It reached a total of about 29,000 men, the conditions of the organisation being that men of good character and physique in each unit accepted, for an extra annual bounty of £1, the individual responsibility to join and serve with the Regular Army anywhere in the case of war or national emergency.

This proved to be one of the chief factors of the recruiting machine for the Regular Army, to the great detriment of the Militia battalions, as all the best and most matured men accepted the double responsibility.

1895. Although the efficiency of the Militia was gradually increasing each year throughout the kingdom, the strength of the various regiments was lessening in a corresponding proportion. This might have been assigned to four important reasons :—

First : The general dislike of the preliminary drill at the dépôt, where the men were not so well equipped, dressed, and cared for as the line recruits with whom they naturally came in close contact; therefore men only enlisted when circumstances of life compelled them to do so, and not for love of soldiering or patriotism.

Second : The continued depression of agriculture and the refusal of employers to engage any men who were Militiamen.

Third : The Volunteers, always a more popular force, were taking into their ranks the class of men who had previously gone to the Militia.

Fourth : Corps were being constantly taken out of their counties and recruiting areas for training, thereby losing touch with local interest, the vital power of maintenance.

1905. Many regiments except those connected with thickly-populated districts and towns were almost decimated by want of men to fill the gaps in the ranks, and the same conditions practically applied to the commissioned ranks.

The South African war had intervened with its well-known consequences. Experience showed that the Militia had proved that it had not been found wanting; but the men after a long embodiment and term of active service had taken their discharge or were time-expired, and the inducements for others to take their places and responsibilities were not attractive enough. Another fatal step was the abolition of the re-engagement bounty, thereby deterring many good soldiers from a continued period of service.

The "Militia Reserve" had also been disbanded in 1902, and so the men of that section had rapidly disappeared; and thus, the Militia Service appeared to be on its last legs, from want of encouragement chiefly and sympathetic treatment.

From the foregoing details it is seen that—

- a. The Militia as a distinctive Service was never in so flourishing a condition as at the earliest date we have taken (1875), although the efficiency of the Force continued and improved each year afterwards;
- b. The association with the Regulars lost local traditions and connections, and that the new conditions of enlistment was unpopular with the employer and employed;
- c. The old system of one Service robbing another, the Volunteers taking from the Militia as recruits, men who would have in earlier days gone to the latter service.
- d. The South African war called upon the Militia to fulfil its new and original functions, in first sending out its best men, the Militia Reserve, as drafts to the Regulars, and then going out themselves in self-maintained units—an impossibility which no conditions of service could satisfactorily perform;
- e. The want of encouragement; both recruiting and re-engagement bounties abolished, and no system of recruiting in a popular manner maintained;
- f. Lastly, but far from that in importance, commanding officers had very little power and supervision in the control of their commands for eleven months out of the year, and were not encouraged to recommend local conditions, which might have, with much advantage, affected their corps.

II.

We now come to the present year, 1909, with its new creation, the Special Reserve, having at present a strength of 58,000 men (approximately), with its establishment of 80,000.

We might again with advantage ask the question : What is the Special Reserve? To the young soldier and uninitiated civilian it might appear to be a new organisation of the National Army under altered conditions of service; but to those who have served in the Militia for ten years or longer it is at once recognised as the old "Militia Reserve" under a new name and of enlarged establishment, with a complement of officers of its own, and with the advantage of a lengthened period of recruit drill and instruction extending over six months on enlistment at the dépôt barracks or elsewhere.

This is certainly a step in the right direction; but with it there is a corresponding disadvantage of a curtailed yearly training of only a fortnight.¹ This in the case of the scientific corps—artillery and engineers—seems almost beyond comprehension, inasmuch as the general consensus of opinion of Militia officers was unanimous that the training of their units might have been increased by a week or ten days on the original period of a month with much advantage to the country.

Although the extended period of preliminary drill is most advantageous to the efficiency of the Special Reserve battalions, there appears that a probable and adverse effect to the recruiting of the Regular Army might occur, as men who in previous years would have joined the line and Army generally may now elect to go to the Special Reserve, hoping that their six months' stay at the barracks would be long enough to tide over the time of depression in their civilian occupation, which cause alone may have induced them to enlist; therefore the old system of robbing Peter to pay Paul again crops up.

The idea of open or general enlistment for the Special Reserve (except for artillery, engineers, and departmental corps) must be governed by much judicial arrangement, and discretion.

The present time cannot be considered a fair example for the recruiting average, as the want of employment, and bad trade, has been abnormal.

Ordinary common-sense points out that the soldier of the Special Reserve, if he is a shrewd man, must direct his thoughts to his ultimate civilian employment, and that his soldiering in its active state is only of a temporary nature, although the responsibility of serving is lasting. Consequently he chooses to serve in his local regiment, but failing that, he might consent to go farther afield and join a battalion or unit belonging to another county, whose strength is under the establishment. It is to be expected that the authorities will readily pay his transit to such a dépôt on enlistment, but will they do so on his return

¹Plus one week's musketry for infantry.

to civilian occupation? If not, imagine a Special Reserve battalion (with many strangers to the district in its ranks) being disbanded under these circumstances and conditions, in a town after a fortnight's training, at once forming a mass of men becoming wanderers or seekers of work.

Instead of the Special Reserve Service helping the deserving unemployed it would be a *vice versa* matter—the Special Reserve creating unemployed in the immediate district and neighbourhood, thereby causing much dissatisfaction to the inhabitants.

On the other hand, supposing the transit of a man to and fro for training with his corps outside his own recruiting area is allowed, will not this be a very expensive item? And probably there will be more desertions and absentees, as the men will not be so easily known, and therefore discovered and traced.

Another question that might justly be asked: Are we getting the same class of recruit for the Special Reserve who came to the Militia ten years ago?

The answer must be in the negative. The old type of Militiaman of good physique and mature age is decidedly conspicuous by his absence. Probably the term of six months on enlistment at the dépôt does not suit his taste, and therefore as this class of man does not go to the Territorial Army, there must be a serious loss to the Empire at large; but in his place the candidates for enlistment are certainly of better education, but of no physique and stamina—mere boys—totally unfit to take the field in foreign parts for some time should they be called upon to do so. This disqualification, together with accessible low figure for purchase of discharge, must always give a very fictitious strength of the *actual serviceable* and trained portion of the Special Reserve.

Under the old Militia system there is no doubt one of the greatest weaknesses in a unit was the dislike of men to take the stripes of promotion, and also the comparatively small number of men who could be really recommended for such position.

Not so much of the fault could be placed on the men themselves, as with the little opportunities given of instructing desirable applicants and making them cognisant with their duties. An old soldier sometimes was the most eligible man owing to his experience and self-confidence; but under the existing conditions there seem to be no inducements whatever for such a person to come back to the Special Reserve, if he so desired, after the completion of his responsibility to the Regular Army.

This is a matter which is very difficult to amend, and which has to be faced, as on it depends much of the working efficiency of a unit.

We now approach the most delicate and difficult question of the new scheme of the Special Reserve, namely,

"The Supply and Qualification of the Officers."

The existence of animation or decay in any unit or battalion will naturally depend on the *esprit de corps* and feeling of unity which prevails through all ranks from the commanding officer to the latest joined recruits.

It is therefore foreseen without prejudice, but with some dismay and anxiety, the position of a commanding officer of the future as regards his commissioned ranks. He will be at the head (to use a sporting phrase) of a scratch pack, there being four distinct sections of officers, each with varying conditions and qualifications :—

- a. The Regular officer (on tour of duty).
- b. The Special Reserve officer.
- c. The Special Reserve officer (retained).
- d. The young officer (on probation).

Each with his own line of interests in various directions; *a* and *d* sections, being only birds of passage, the responsibility of maintenance of the units must therefore rest on *b* and *c* sections.

Can this solution of a difficulty succeed? It is certain that many if not all officers of experience will be in accordance with a negative answer.

Undoubtedly the introduction of the Regular officer should, and will, add to the general efficiency of a battalion; but they should be brought in as instructional staff and not as company officers.

Another of the greatest difficulties and disadvantages which had to be encountered in the late Militia Service was the constant change of company officers, due mostly to the lamentable deficiency. It was always expected, and naturally found that the greatest efficiency and zeal in a company was where its commander and junior officers were kept intact for a few years, rather than in one where a distinct change, however efficient the officers might be, was necessitated each year.

The Special Reserve (the Militiaman) requires a great deal of tact and judgment, backed up with strict discipline, to deal with him, owing to his prolonged absence from the ranks in each year—so different to the Regular. But experience teaches that he is most amenable, and will do anything for the officers whom he knows, trusts, respects, and, above all, understands.

If that difficulty existed in past years, how much more will it be increased under the present arrangement, with so many company officers entirely birds of passage?

The supply of suitable gentlemen to take commissions in the junior ranks is a matter of much speculation and doubt. There seems at present very little inducement to do so. Under the old system the young officer joined a Militia unit in order to get through it a transfer to the line on qualifying for same—a privilege which was only permitted to the old Constitutional Force. During latter years it was difficult to get candidates, even under these conditions, and now, under the regulations (of

probation) for twelve months with a Regular battalion, the situation appears far more desperate and disheartening.

The old passage privilege to the Army held by the Militia is now extended to the Territorial Army, a much larger organisation, and therefore it cannot but be expected that gentlemen who are desirable candidates will accept commissions (on probation) in the Special Reserve, while the more easy facilities for carry-out their duties without disturbing their social and necessary associations of life are extended to them by the Territorial Force.

Therefore the commission in the Special Reserve should carry with it some extra inducements, otherwise the commanding officer, or the person held responsible, will have a stupendous task before him to fill up the gaps in the respective units.

No attempt appears to have been made to remove the grievance under which the keen, capable, and experienced officer of the Militia suffered.

He complained that having trained with his battalion or unit, and having been attached to a Regular unit, both for a month in any one year, nothing further was open to him to improve his military knowledge; nor were any permanent positions of employment, however minor, held out for competition to him. Indeed, less chance of military duty now presents itself than in former days, except under the conditions of war being declared or national emergency, and therefore the retaining fee of £20 will have no attraction for many men who would prefer to be under no restrictions, and so eligible to accept any appointment of civil work which might present itself. This is most disheartening to many a capable officer, whom the Service can ill afford to lose, as they were looking forward with bright hopes that commissions in the Regular Army might be obtainable under some modified form.

III.

After a scanty survey of the "Militia" during the past thirty years, and a short insight into the conditions of the "Special Reserve," it is not difficult to see that both Services have their advantages and disadvantages.

It is apparent that the maintenance of regiments and corps was in a more flourishing state in the early days, rather than later on, in that the inducements to enlist in the various local units were brought home to the people of the locality in various ways, which were considered most desirable, and at the discretion of the commanding officer, who was then, and undoubtedly *should be now*, the only person responsible for the position of his corps, both as regards the quantity and quality of his men.

Here a suggestion might be thrown out which would probably prove advantageous both to the employer and also to the employed, and consequently to the recruiting generally: "That men for the 'Special Reserve Service' should be enlisted throughout the year, but that the six winter months (from 1st

October till 31st March) *only* should be set aside for the preliminary training at the barracks or dépôt." This would obliterate the uncertainty which now exists in the minds of probable recruits, and especially of the employer.

There is also a doubt whether the condition of "six months at the dépôt" is productive of the best results in recruiting, as many men of mature age, who formerly went to the Militia now stand aloof, and hesitate before joining, leaving youths or mere boys to take their places in the ranks.

The general concensus of opinion is that the annual training, as laid down in the present regulations, is all too short, and almost develops itself into a farce, as two days must be set aside for assembly and settling down and the same period for breaking-up camp and dismissal. A Sunday intervening, and two or three wet days, would indeed make much practical work impossible.

No training of a unit should be less than a month, as the *same* expenses are incurred in instituting a camp for a shorter time, and these press heavily, not only upon the officers but on the national expenditure.

Therefore a preliminary drill of four months at barracks and a yearly training of not less than four weeks would have a far more satisfactory result with no greater expenditure, and be more generally popular.

Of the inducements for enlistment into the Militia in by-gone days, perhaps there was no greater than the "recruit bounty" or "bringing-in fee," as it was termed; and, also, no greater mistake was ever made than when the re-engaging bounty was abolished. Both of these, however small, should be reinstated.

As a substitute for the non-training bounties now given, known as "ring money," which is neither understood nor valued, pay of 2d. and 3d. per diem, according to rank, should be paid during the non-training of regiments, as now exercised to the Army Reserve. This would have a decided good effect, and be appreciated.

As regards the commissioned ranks, there is no doubt, as previously stated, that the inclusion of Regular officers into corps will be of great advantage; but they should be brought as "instructional and permanent" staff on a tour of duty, and not as company officers. The adjutant and quartermaster as at present, and as a new experiment an instructor of tactics and company training, and an instructor of musketry added.

What can be more *ridiculous and more unsatisfactory* than the position of the instructor of musketry at the present time? He is, as a rule, a Special Reserve officer (unemployed), has nothing whatever to do with the initial instruction and training of the recruits in musketry—not even a voice in the matter. Yet, directly the unit comes out for training he is held responsible for all musketry and its entire procedure and *efficiency* — from men whom he has probably never seen or heard of.

The objection to the Regular as a company officer is, firstly, as before expressed, the constant change, and secondly, that all such officers in the unit should be on the same basis and qualification; then, and then *only*, can the friendly rivalry amongst companies, which so often promotes the entire and high efficiency of a corps, be maintained.

The preliminary training of the men at the dépôt should be conducted by the Special Reserve officers, under supervision of the "instructional and permanent" staff officers, and this would in a great measure fulfil the promise of the Secretary of State for War, that Special Reserve officers (up to the number of 220) would be employed during the non-training, and thereby remove that grievance which has been so fatal and prejudicial to the interests of the late Militia Service, in that officers had no opportunity of employment outside the training of their own unit or a chance vacancy in another corps. Such a procedure would be one of the keynotes of success for the future, and indeed would put new life into those who soldier for the love of it, and who now feel there is no more encouragement given by the War Office to the keen and qualified man than to the slack and indolent officer who looks upon the short time of training as a pastime, and sound practical and military knowledge of quite a secondary and unimportant consideration.

Again, it would remove a difficulty which will at once require much delicate handling—the number of officers in some corps above their establishment—especially as the feeling exists that such has been caused unnecessarily and to the detriment of many capable Militia officers who would rather resign their commissions than be transferred from their own battalion, where they have spent many years, and, in a measure, contributed to the regimental efficiency.

It would also be found a success without doubt, if a Special Reserve officer, provided he be a local man, was employed as a recruiting officer, in conjunction with the officer responsible for the recruiting of the Regular units in the immediate district; and indeed if recruiting powers, with a little remuneration, were extended to the Special Reserve senior non-commissioned officers it would be productive of much good, as they are in constant and close touch with the lives and peculiarities of the population of their respective districts.

IV.

In conclusion: *Experientia docet*, that the Militia, despite the great disadvantages under which it was suffering, never failed its Sovereign and country in time of an emergency, nor neglected to fulfil the duty allotted to that Service. Will the Special Reserve, with its proposed advantages, do better? It should and will, if of these advantages, now speculative, the first and greatest is a sympathetic and just treatment for each unit on its own peculiar conditions, and on the prevailing

vocations of life, dispositions, and feelings of the men who it is desired to enlist. It cannot be forgotten that it was from a general want of local knowledge and surrounding characteristics of the people and country that the Militia suffered, and now (and now at once) is the time to change, and adopt conditions which will not only bring the "country to the Army," but "the Army to the country," and thereby make the "Special Reserve" the great success that every national well-wisher hopes and desires for.

Lieut.-Colonel R. MACKENZIE HOLDEN (4th Bn. The Cameronians) :— I think we are all very much indebted to Colonel Watts for giving us this opportunity of comparing the relative merits of the old Militia and the new Special Reserve. I do not know how far officers on the active list are justified in criticising the actions of the authorities, but there can be no harm, I presume, in those who have had some little experience of the two forces venturing to suggest in what manner this new scheme might be improved. The Special Reserve is a very important factor in national defence, and one upon which many people feel very strongly. They feel very strongly on the disbandment of an old force like the Militia, the only force in the kingdom which contained the power of enforcing military service, a force which has existed for over a thousand years, and has never failed the country, while it appealed in a peculiar manner to a particular class of the public. But, in considering this subject, we must approach it from a broader point of view. We must approach it from the point of view of the good of the Army generally. We may differ in politics from Mr. Haldane; we may differ from him in regard to this scheme; but we cannot get over the fact that the Government has given the right honourable gentleman a mandate to reorganise the military forces of the country. I think it therefore becomes our duty, whether we hold the King's commission or whether we are civilians, and perfectly irrespective of politics, to give that scheme a chance; to give it every opportunity of proving its value or of showing its unsuitability to the requirements of the country. It is claimed for the Special Reserve that it has many advantages over the old Militia, and I shall be the last to deny it. But in justice to the old Militia I confess I at present do not see anything that is being claimed for the Special Reserve that could not have been equally well carried out by the old Militia with its old organisation. What are the special advantages claimed for the Special Reserve over the Militia? First, that the men are Regulars and no longer auxiliaries; second, that they form a reserve for the Regular Army, and are not a weak second line; third, that the men are enlisted for foreign service, and that it is not left to their volunteering when an emergency arises; fourth, that the recruits undergo six months' drill on enlistment; and finally, that the officers receive better opportunities for training than they ever before possessed. With your permission I will take these one by one: (1) You may call a man a Militiaman, a Special Reservist, or a Regular; but a rose smells as sweet under any other name, and you cannot get over the fact that this particular individual is a civilian first and a soldier afterwards—what Lord Macaulay very aptly called an "occasional soldier," and an occasional soldier is one who, in my opinion, requires different treatment from that meted out to the permanent Regular professional soldier. (2) We are told that the new force is a reserve for the Regular Army, whereas the Militia was merely a weak second line,

I am not prepared to admit that the Militia was a weak second line; I maintain that it always has been a strong support and a real reserve to the Regular Army. Without going too far back into history, I may remind you that in the year 1799 over 40,000 Militiamen volunteered to the Regular Army, and fought in the campaign in Holland in that year and Egypt in 1801 in their Militia uniforms. During the seven years of the Peninsula War over 100,000 Militiamen were transferred to the ranks of the Regular Army, the majority having to fight in their Militia uniforms. During the Crimean War 32,000 Militiamen volunteered to the Army, while during the last South African War over 50,000 so volunteered. In addition, some 30,000 Militia Reserve men were called to the Regular Army, and over fifty units went abroad as units. (3) We are next told that the Special Reservists are enlisted for foreign service, whereas the Militia were only liable to go of their own free will. The Militia has begged for years past to be enlisted for foreign service. I myself gave a lecture on that very subject in this Institution twenty years ago, but what was naturally looked upon as of minor importance when suggested by an insignificant Militia captain is magnified when taken up by a Cabinet Minister into a proof of marvellous legislative and constructive ability. (4) We are next told that the recruits undergo six months' drill on enlistment, whereas before they served but 49 days at a dépôt. We also asked for that. I, in conjunction with Colonel Hill, who is here to-day, was deputed by the Militia Rifle Association to give evidence on behalf of the Militia before the Norfolk Commission, and a six months' drill on enlistment was one of our recommendations. The experiment was tried in twenty Militia battalions and pronounced an unqualified success when conducted by its own officers. Having been pronounced an unqualified success when conducted by its own officers, it is made universal for the Special Reserve, but its own officers are not permitted to supervise it. (5) We are next told that the officers of the new Special Reserve are given opportunities and advantages in the matter of their professional education such as they have never before possessed. I do not deny that this is a very great privilege and advantage, and I am certain the Special Reserve will greatly benefit by it. With your permission I should like now to suggest in what respect the new scheme fails, and where it might be improved. In the first place, as a commanding officer I naturally feel very much the fact that the commanding officer has become, if possible, a greater nonentity during the non-training period than he was before. For three weeks in the year he is privileged to command his battalion, but for eleven months and one week he has practically nothing to say to it. You may tell me that he is privileged to inspect his recruits at the dépôt four times a year and receive pay for so doing, and that he may find fault and make recommendations. I reply that he may inspect his recruits and send in recommendations to his heart's content, but that nothing will come of those recommendations unless they receive the approval of the major of the dépôt—his junior officer. I am not in favour of the present principle, upon which officers of the Regular establishment are appointed for a three years' tour of duty with Special Reserve units. From what I have seen of their duties up to the present I do not see in what respect they could not be equally well carried out by the ordinary Special Reserve officers. The Army officer, I feel sure, dislikes the system more than we do, and very naturally so, because it places him in a false and unfair position. I consider the appointment of Regular officers in this manner militates against our getting officers to join the Militia. It militates against the efficiency of those we do happen to get to join; it militates against the efficiency of the

Regular Army; and it is a roundabout and expensive procedure. It militates against our getting officers to join because it has curtailed the few inducements we were able to offer them; it militates against their efficiency because it deprives them of the opportunity of drilling, instructing, and training the recruits; it militates against the efficiency of the Regular Army because by depriving these officers of the opportunity the training of the recruits gives them you lessen their opportunities of qualifying for the serious position they will occupy in time of war with their line battalions. It is a roundabout and expensive method for the country because these Regular officers are doing permanent duty all the year round, whether there are fifty recruits or none, and they get paid all the time and are earning pensions, whereas the Special Reserve officer is only called up when a sufficient number of recruits requires his services, and however long he may serve, he is not entitled to a pension nor to a gratuity. With regard to the actual Special Reserve itself, what are its functions? To fill the wastage of war after the commencement of hostilities. So far as I can see at present there is a very great danger of the Special Reserve becoming a recruiting agency for the Regular Army, and failing, in time of emergency, to fulfil its functions. The recruits are taken at the very young age of 17, at the height of 5 ft. 2 inches, and they are encouraged to enlist in the Regular Army after three months. It is calculated that some three-fourths of them do so enlist. The majority, I have no hesitation in saying, join the Special Reserve with no intention whatever of remaining in it, but to make use of it to get the bounty, and because it is a sort of School of Physical Culture for the Army. Directly they reach the required dimensions they go on to the Regular Army. Supposing the whole of the Special Reserve units were mobilised to-morrow, what would be their condition? You would first have to deduct the absentees; you would then have to deduct the men who have purchased their discharge, those who had enlisted in the Army, and those who were medically unfit; and you would have to deduct every young man under the age of twenty. I doubt in these circumstances if the number of Special Reservists available for the function of filling the wastage of war would be much greater than the numbers of the old Militia Reserve. There is one other point that I should like to refer to, and that is the question of drafting. I do not think a single Special Reserve officer objects to the principle of drafting, but he does object to the system under which it is now carried out, because it is destructive of enthusiasm, destructive of *esprit de corps*, and therefore of efficiency. A man is enlisted for general service, and he has no security whatever that he will be called upon to serve with the regiment for which he enlisted. He may have enlisted in either the 3rd battalions of the Seaford or Cameron Highlanders, in which the great majority of the men speak no language but Gaelic. He has no security that he will not be drafted to a Welsh or an Irish regiment in the event of war. I am sorry if I have detained you too long, but if I may I should like, in conclusion, to make one or two suggestions. I venture to suggest that no Special Reserve recruit should be permitted to enlist in the Regular Army until he has performed his six months' recruit training at the dépôt and served one annual training. I strongly recommend that discharged soldiers of the Regular Army be permitted to enlist in the Special Reserve up to the age of 34. It is not easy to grasp why the age for enlistment of old soldiers should have been limited to thirty. A man who joins the Army at eighteen for twelve years' service with the colours and the Army Reserve will be thirty before he completes his service, so that discharged soldiers are practically debarred from the

Special Reserve. This is strange in view of the fact that once in the Reserve he is allowed to serve till he is forty. Again, the age for enlistment in the Regular Army is eighteen and over, so that there must always be a number of men in the Army Reserve over thirty; yet they must not join the Special Reserve after that age. I venture to suggest that if some of the points to which I have taken the liberty of drawing attention were considered by the authorities, it might tend to increase the value of the Special Reserve as an important factor in our present system of national defence; but at the same time, I am strongly of opinion that however much you improve the Special reserve, and however much you improve the Territorial Army, we shall never have a sound system of national defence in this country until we have the manliness to adopt that for which I believe the country is ripe—universal military training.

The Right Hon. H. O. ARNOLD-FORSTER, M.P.:—I speak with some diffidence because on the last occasion I was here I came into the theatre not knowing there was a meeting, and was invited by the Chairman to speak. I did speak, and I was told subsequently by, I think, a military journal, that I was introducing politics into the meeting of the Institution. I spoke then as I speak now, as one who thirty years ago was admitted a member of this Institution because I held the Queen's commission, and that is my only right and title to speak to you now. As this is a matter of absorbing interest, and as I have quasi invitation from the Chairman, I should like to say a word with regard to it. I heard with delight the most excellent speech made by Colonel Holden, and I think, together with the paper, it gives us great food for reflection. I do not speak as a Militiaman but as a citizen who has to consider what the value of this experiment may be in time of war, which is the only time when it will be tested, when we are fighting against a competent and well-armed army. We are asked by the lecturer to compare the value of this Special Reserve with the organisation that preceded it, the Militia. I think the lecturer gave the number of the Special Reserve as 68,000. I daresay that may be so, but I see from a return which I have in my hand that the number is given as 58,000. The point is unimportant, for neither figure has any relation whatever to the facts, and I think we ought to clear up that question to begin with. I think I shall be speaking the experience of many officers when I say that what has really happened in the Special Reserve has no correspondence at all to what is supposed to have happened. What has really happened is this, that in the depôts the number of men who have transferred to the Special Reserve averages from 20 to as much as 100, but not more; that some 150 to 200 have passed through the Special Reserve to the Regular Army or to the Royal Navy; that a limited number of men have been discharged; that beyond that some 150 or 180 men are now at the depôts drilling, of whom from 40 to as much as 90 per cent. will, to the knowledge of their officers, pass through into the Regular Army as soon as they get a chance. What is the remnant of from 50 to 60 boys who now form the Special Reserve unit in any particular district? What is its composition? It is composed of all those who have been relegated to the Reserve, either because they are too young or because they are too short to come up to the military standard. It is composed in certain cases of men who have been relegated because they are not desired by the Regular officers of the line battalions to which they belong. Colonel Holden spoke of the possibility of what would happen on mobilisation, and I should like to emphasise that point. Line battalions of 720 establishment have an average strength of 600. They are now

being filled up from the Special Reserve with boys between 17 and 18 years of age. The result is that whereas in 1899 a very large number of men had to be left behind on account of youth, a still larger number will be left behind in the future. Take a battalion of the Line of 600 men, it will discard 300 on mobilisation as unfit for service. It will fill up from its Special Reserve battalion. If the Special Reserve battalion is 550 strong, which is its maximum, you will have to deduct half that as under age, probably much more. You will then have 275 men, less medical casualties, to fill up the Line battalion. The Line battalion will then be made up to 500 men, and will require to be completed from its own reserve. Have we gained anything on the Militia by this microscopic addition to the first fighting line? I want to know what is the value of this gain. I say that in a war which we are likely to be engaged in, it is of no value at all. That is not merely my opinion. I have here in my hands the opinion of the highest military authorities of this country. They are, I am told by the Secretary of State, unanimous in the belief that the men who have been trained for two years with the colours with their own officers and non-commissioned officers in a full battalion are so undesirable that they ought not to be imported as reservists into a British regiment which is to take the field. In the opinion of the majority of the military advisers of the Government, battalions of reservists with seven years' colour service are greatly to be preferred to battalions composed of "inexperienced and partially-trained reservists, who must necessarily be quite inefficient compared with men who have already gone through a substantial period of service abroad." If that is the universal military opinion with regard to reservists who have been drilled for two years with the colours, what are we to say of a battalion, 50 per cent. of whose strength is to be made up of these boys who are now being relegated to the Special Reserve in the dépôts? My complaint is not of the existence of the Special Reserve, but of the Special Reserve as now constituted. I believe the Special Reserve might have been an enormous improvement upon the Militia, because we all know there were defects in the Militia as a fighting force. But have we removed them? What have we done? We have taken away the units. Let us dismiss the idea that there are going to be any units in the Special Reserve. As Colonel Holden has pointed out, we have destroyed the whole authority and interest of commanding officers; we have enlisted the soldier for general service, so that until he actually joins his regiment in time of war he does not know in what regiment he is going to serve. We have dissociated him from his non-commissioned officers, and we have, for some reason which I do not understand, eliminated 20,000 men of thirty years of age and upwards who served in the Militia, and who are prohibited from serving in the Special Reserve. I cannot see that in any of these particulars we have gained anything at all; I believe we have lost a great deal. I should like any officer who follows me in the discussion to tell me whether I am right in my interpretation of what is happening—that in these dépôts we are gradually accumulating a residue of men who are considered by the Line officers who conduct the dépôts to be undesirable or unfit for the Line battalions, and who are left in the Special Reserve for that reason and that reason alone. I should like to ask if it be not true that many of these men come up week after week and month after month, when they have relieved themselves of their physical disabilities, and go into the Regular Army; and whether we can expect—I will not say with units of men, but with squads of men with these antecedents; men without officers or non-commissioned officers, without a colonel with whom they are

acquainted even by sight, and without the traditions of a regiment—whether we can expect from them what we do expect and have hitherto justly expected from a British soldier in the field? I should like any officer to tell me whether I am very far abroad in that diagnosis of the situation. It is not a diagnosis formed out of my own brain; I have taken some pains to ascertain what is happening in various depôts, but I am aware that no two depôts are alike, and that what has been my experience may not be yours. But if my experience is at all in accordance with the general average of what is taking place, then I must say I think that Colonel Holden has very good reason for the conclusion to which I gather he has come, the conclusion being that we have not greatly strengthened the forces of this country in time of war by transforming the Militia with whatever faults it possessed, into the force which we hope will some day exist, but which does not at present exist, under the name of the Special Reserve.

T. MILLER MAGUIRE, M.A., LL.D. (Barrister-at-Law, Inner Temple):—I must obey the call of the Chairman, but after the speech of my right honourable friend, Mr. Arnold-Forster, I think I really have little new to say. I speak not as a Militiaman, but as an old Volunteer, who is, I believe, in a very humble capacity a member of the Territorial Army. I have tried to find out, but I am not very clear about my position; however, we must all do our best for our military forces, whatever they may be called. No matter in what capacity—and I have been here as civilian, private, non-commissioned officer, and officer—I never was at any meeting of this Institution at which I attained to such a state of profound depression in so short a time. The speech of Colonel Watts and the alarming and indeed awful statement, clear, distinct, serious, of almost mathematical precision set forth by Colonel Holden, and the admirable summary of Mr. Arnold-Forster, place us in this position: that we are quite convinced that even if only one-half of what they say be true, the Special Reserve is one of the very worst military births of Time. I think that must be the impression conveyed to all our minds by the speeches so far. As these gentlemen were speaking I tried to think of some historical illustrations suitable to the occasion, but the only simile I could find is that of Milton, whose spirit has so recently been hovering over us, that our new military system is something like "that Serbonian bog between Damietta and Mount Casius old, where armes whole have sunk." Calling back to mind the expressions used by the opener of the discussion, they were enough to give one an attack of nervous fever. He pointed out that every defect conceivable in any organisation of men, whether in civil or military organisation, appears to exist in its altitude in the Special Reserve. Colonel Watts proves that its organisation is bad, its recruiting is bad, its officers are futilities, its instruction is bad, and it is useless for its object! The great majority of the men in this incarnation of failure enlist not as patriots or through a spirit of adventure, or for a career, but because they are woebegone, miserable persons on whose shoulders richer and more prosperous persons wish to devolve their duties. That is the only reason why they enlist: forlorn misery. Talk about conscription! Talk about obligatory service! Bacon says that the "rebellious of the belly are the worst," and certainly the worst and the basest kind of conscription is the conscription of the stomach. Our Special Reserve is recruited, as also is our Regular Army, to a great extent, by hungry, out-of-work boys! Verily a disgraceful reflection on the so-called patriotism of our race. Rely for Empire on the unemployed! Trust to

beggars for honour and your chivalry. *Proh Pudor! Eben prisca fides!* When they do enter this wretched organisation everything is done, as has been clearly pointed out, to deprive them of the means of learning their business! The reason a young man enters into any trade is that he wants to learn his business and develop into something greater or better than a mere recruit or a mere tyro. The recruit or the tyro in this wretched force, evolved from the metaphysical brains of the legal luminaries who govern us, enters not because he wants to learn, but because he is an out-at-elbow and miserable person. Then, instead of, as in any other business or profession, being encouraged to learn and become a master of his art, he is deprived of all the machinery by which in any other business or profession he learns how to become a master. Is not that a curious anomaly? I was a private soldier; I was on parade grounds learning the elements of the military arts in various regiments under excellent responsible colonels, but I always thought sound instruction in drill and all my other duties indispensable, and it was provided lavishly for me, and I got it from admirable sergeants and other instructors of the Guards, as well as Volunteers. Hence I learned something about the training of men and of drill. We were taught by the most skilled experts we could procure; as a subaltern we were taught by more skilled men still, and thus we grew more and more unto the perfect day. But although there are excellent non-commissioned officers available, they will not be allowed to be taken on in the Special Reserve, if what Mr. Arnold-Forster says is right. Then, when you come to the vital spark of the military flame, that is to say, the officers—the brain and the soul of the Army, according to the Japanese—we have here everything put into the way of the colonel doing his duty efficiently, except for four weeks out of fifty-two, and no encouragement whatever is given to the younger members of the force to learn their profession or to teach their subordinates. Hence the Special Reserve is lacking in brains, and as the non-commissioned officers are the backbone of a military force, it is lacking in backbone. What a curious kind of vertebrate or invertebrate organism it must be. I had a drunken cook once, but she was a fairly good cook, and I did not turn her out until I could get some person who was a good cook and sober at the same time. I did not turn her out until I could get a person who was at least her equal. There was not the slightest use in abolishing the Militia unless you can be certain of something better than the Militia. Is this force better than the Militia? Is it cheaper than the Militia? Is it more honourable than the Militia? Is it more coherent than the Militia? It is not, you say! Then are not we taxpayers paying for something that we ought to have and have not got? The lawyers who are on the Cabinet—I must not say a word against a Cabinet Minister in this assembly, party politicians are sacred here if nowhere else—ought to have read the works of the most illustrious of all English lawyers, Lord Bacon. Lord Bacon said: "It is not wise to try experiments in States." See that necessity bringeth about an innovation. Do not let the love of change merely bring about an innovation. Manifestly it was not necessity that brought about this innovation, but a mere love of change that brought it about, and hence the innovation must necessarily have done the State harm. I have had plenty of young Militia officers under my charge—hundreds—and I have been often at trainings in Great Britain and in Ireland, and I ought to know something about the old force, and I am here to declare that I agree in every respect with Mr. Arnold-Forster, that everything in the Special Reserve is for the worse, and that it should be speedily ameliorated out of existence. The gallant Colonel Holden brought

us back to history. Well, the ballot was an essential part of the Militia in the time of the "Great Commoner," William Pitt; it was an essential part of the Militia in the time of the Peninsular War, and Napier and Alison both prove that "the Militia recruited by the ballot was an indispensable element in the success of our arms throughout the Napoleonic wars. We had in London the ballot to such an extent that there were regular offices opened for the sale of substitutes in the Strand and in Oxford Street, and in 1803 the position of affairs was as follows, and I think this is a situation that might be well weighed now. We have abolished the Volunteers, I am sorry to say—

The CHAIRMAN :—I am afraid you are rather going out of the region with which the paper dealt.

Dr. MILLER MAGUIRE :—I am dealing with the miserable and forlorn bantling called the Special Reserve, over which the previous speakers have been shedding rhetoric tears, and as it is a substitute for the Militia, and inasmuch as a man was allowed a choice in 1803, and for the next decade, I think, my lord, you will find that I will stick to the point. In 1803, by the old law, ballot was in full force for the Militia, and Volunteering was also in full force, and now the Special Reserve and the Territorial Army have superseded both. So late as 1803 to 1815 every man was liable to serve either in the Regulars, in the Militia, or in the Volunteers. The Volunteers were responsible for their own outfit and required no pay. If a rich man or a prosperous man was not in the Volunteers he was liable to all the exigencies of the Militia ballot, but he escaped from that by simply becoming a Volunteer in a regiment authorised by His Majesty. That plan might work well now with regard to the Territorials. The result was that London, out of a population of 1,000,000 in 1803, supplied 47,000 well-drilled and equipped Volunteers as well as Militia, all admirable troops. How many are available to-day for the Territorial Army and Special Reserve together, and of what quality? Not 40,000 out of 5,000,000! But, my lord, I do not wish to intrude on the time or to obtrude irregular matter. I should not have spoken at all had you not done me the honour of calling upon me; but the subject of the lecture is of the very gravest importance from every point of view. I thank the gallant lecturer, who is an old friend of mine, for the paper he has read to us, and I am very sorry indeed as a citizen, a taxpayer, and as a person who has been connected with the Army since his boyhood, to have been obliged to listen to such a deplorable word-picture of decadence as has been presented to us this afternoon. The specialities of the Reserve seems to be: improvisation, incapacity, and incoherence, and the result in time of danger must be impotence, and in time of war a "gruesome spectacle of dolesome death or sickening shame."

Lieut.-Colonel A. LEETHAM, R.M.R.E. :—I would like to make a few remarks, in the first place with regard to the length of training in the Royal Reserve Engineers. In my opinion the fifteen days' annual training is totally inadequate for this branch of the Service, and is a pure waste of public money. Out of this period there must be deducted one day for assembling, one for dismissal, two Sundays, two Saturdays—which must be taken as only half a day each—one day to draw stores, and one day to return stores, which leaves only seven working days. This is wholly insufficient to train men as sappers and make them able to take their place in the first line of the Army. I would suggest that the period of recruit

training be reduced to four months, and the annual training be two months as previously for the R.E. Militia ; the cost would be about the same, but I am sure the country would gain in the long run. Again, I would point out how absolutely impossible under these fifteen days' training conditions it will be to select with any care suitable non-commissioned officers. With regard to the question of officers, the appointment of Regular officers to do duty with the Special Reserve does not affect this branch, as none are to be brought in, but the reduction of the establishment of officers by four majors, two captains, and seven subalterns in the Royal Monmouthshire Engineers, who have now got to be absorbed, offers very little chance of promotion to any young officer joining the corps for many years to come. As to the reduction of two field companies, there is no doubt whatever that the two field companies which have recently been reduced had attained a very high state of efficiency, and were just the units that the men of the Special Reserve were most capable of providing. We never had the least difficulty in obtaining our drivers. Many thousands of pounds had been spent on these companies, but they have been swept away in order to create what are only field companies in the shadow, as most of the Territorial field companies must necessarily be for some time to come. Turning to the question of musketry, the Royal Reserve Engineers are not to perform an annual course of musketry. If there are any troops in the Service who should be expert in the use of the rifle it is the Engineers, and especially the men of the railway companies. It is well known from experience that this branch has to do their work, if it is to be done at all in time to be of any use, with no other protection than that of their own rifles. In theory they should always be protected by strong covering parties of both cavalry and infantry, but in practice these covering parties can hardly ever be provided without great delay, and the work required, say railroad repairs, must go on without waiting for these covering parties. Yet the Royal Reserve Engineers have been deprived of their annual course of musketry, which to my thinking is sheer cruelty. I will not delay you any longer, except to express my regret that the bridging companies, which I had the honour of training, have also been taken away.

Major A. I. MENZIES, 3rd Battalion The Gloucestershire Regiment :—
I apologise for addressing the meeting at all, as I am not in the least accustomed to public speaking, and I have never addressed an audience before in this Theatre. But having served for nearly twenty years in the Militia, I wish to refer to certain points which I noticed in the admirable lecture of Colonel Watts. I think the country in one sense is being misled. Even Colonel Watts in his lecture referred to the Special Reserve as a substitute for the old Militia. I wish to say that the Special Reserve is in no sense a substitute for the old Militia. In the old Constitutional Force there was a Militia Reserve, and from 20 to 30 per cent. of the men—the best men in the battalion—received £1 extra bounty each year, for which, when there was an emergency, they were liable to be called up to join the line battalion. What I say is that the whole of the Special Reserve now is in exactly the same position as the Militia Reserve, and in an emergency all the Special Reserve will be called up, certainly within six months, to join the line battalion. So that it is in no sense taking the place of the old Militia because the Special Reserve will all have been absorbed in this way. The Militia does not exist; the Special Reserve will be drafted into the line battalions. Colonel Watts referred to the fact that in the old Militia the colonel during eleven months in the year knew nothing of the battalion, and heard nothing of it. To some extent

that was an exaggeration; but if he applies it to the Special Reserve it is certainly no exaggeration, for the whole thing is conducted entirely by a major from the line battalion who is on the Regular establishment, and not even as a matter of form is anything sent on to the commanding officer. I know that for a fact. Mr. Arnold-Forster has told us what is perfectly true, that we must get out of our minds that we exist as a unit in the Special Reserve. We certainly do not, and if we do not exist as a unit, how can you possibly have any sort of *esprit de corps*? Colonel Watts incidentally referred to the instructor of musketry in the Special Reserve, and said that he had nothing to do with the training of the Special Reserve recruits. In the old days the instructor of musketry was called up, and he had a sergeant instructor of musketry, the most useful man in the battalion, to help him and to devote the whole fortnight to training his recruits. That was certainly very well done, because there was plenty of time to do it, and they took an interest in it. Now the instructor of musketry is not called upon to have anything to do with his recruits, and the sergeant instructor of musketry, who was, I maintain, always a very valuable non-commissioned officer, is wiped out. Colonel Watts said at the end of his paper: *Experientia docet*; but I prefer to say: *Experientia non docet sed docebit*. In the remarks I have made I wish to make it clear that I say nothing against the Special Reserve as a valuable adjunct to the line battalions or against its recruits and the men composing it; but what I want most seriously to emphasise is that the Special Reserve, when called upon, will perform absolutely different functions to those that have been performed by the Militia in the past; in short, there is no force, no second line, no collection of self-contained units to take its place in the next national emergency.

The CHAIRMAN (Viscount Hardinge):—In the first place, may I tell you how pleased I am to have been asked by the Council to preside on this occasion, and I am sure you all will agree with me that we are greatly indebted to Colonel Watts for the very interesting lecture he has given us. We have also had a very interesting discussion, in which I am very glad I induced my friend Mr. Arnold-Forster to take part, and I am sure that nothing but good can accrue from what has been said this afternoon. I am sure that the more we, as Special Reserve officers, ventilate our opinions by free and open discussions such as we have had this afternoon, and by pointing to any weaknesses or weak spots that we may discern, the Army Council will be only too ready to take them into account and help to achieve that which I am sure all Special Reserve officers wish to do, and that is to see greater efficiency in the military forces of this country. If there is anything I can do by bringing forward questions in Parliament or by moving a motion, I can assure you I shall be only too pleased to do so. It is somewhat a strange coincidence that the period during which Colonel Watts belonged to the Militia dates from the year when I first had the honour of joining the Militia. Although I cannot speak with the same authority as Colonel Watts, because my service was not continuous (although I did between my two Militia services twenty years' service in the Army), yet at the same time I do not wish it to be inferred that I found that service in the Army was detrimental to me. On the contrary, I found when I rejoined the Militia, and had the honour of being given the command of a battalion, that it had been a great benefit to me. I consider, and always have considered, that continuous service for any length of time in any one branch of His Majesty's forces is apt to put one too much

in one groove, and therefore to make him narrow-minded. The old Constitutional Force—the Militia—has ceased to exist, which I can assure you nobody regrets more than I do. Whatever their shortcomings may have been in the past, I do not think they were attributable to anything on their part. I can honestly say that during the last ten years of its existence the Militia made progress which was deeply to its credit, in my opinion, and I think it was very well illustrated by the magnificent service they gave to this country during the last South African war. As the Militia does not still exist, I do not wish to confine my remarks this afternoon to that force, but to the new force—the Special Reserve. I believe that what an officer in my regiment, Major Huntingdon, wrote in the *National Defence Magazine* for this month is quite correct, when he said: "The die being now cast and the Special Reserve formed, whatever prejudices we may have had in the past, it is clearly our duty loyally to try and make the new service a success." I thoroughly agree with him in that. If we can only move along those lines I have little fear that the Special Reserve will not become what Colonel Watts described in his lecture—the great success that every well-wisher hopes and desires for that force. But how is that to be attained? In my opinion we must deal with the different weaknesses one by one, which no doubt emanate from the rank and file. I think the best thing to do is to begin from the top rather than from the bottom—that is, first of all to deal with the officer question, then the non-commissioned officer question, and then the men. It has always appeared to me that what applies to the Territorial Army applies to a large extent to the Special Reserve. I think, and I have always thought, that one of the greatest mistakes that the County Associations have made up to date is that they have paid attention far too much to the men rather than to the officers and non-commissioned officers. It must be patent to anyone who has any military knowledge that it is no good having men unless you have good officers and non-commissioned officers to lead them. I think that is the line the County Associations should have taken. I think they have rather taken up the attitude of putting the cart before the horse. No one who knows anything about the Special Reserve can deny that the most difficult problem that has to be solved at the present time is undoubtedly the officer question. I do not myself see what the remedy is, for this reason, primarily, as Colonel Watts described in his admirable paper, that the old passage privilege from the Militia into the Army is now extended to the Territorial Army, and it seems to me that the difficulties of getting young officers are thereby more or less doubled. Under the present system, in the Territorial Army their duties are much lighter. I agree with what Colonel Watts said, that a commission now in the Special Reserve must for that reason carry with it some extra inducement in order that young officers may be forthcoming. At the same time, it is for the Government to find a remedy. Whatever the inducement applicable to the officers is, it appears to me it is equally applicable to the non-commissioned officers. Important as it is with regard to the officers, it is equally important to get real good non-commissioned officers for the duties they have to perform, because it is upon them, in conjunction with the commissioned officers, that the success of the Special Reserve must primarily depend. I do not wish to deal with the question of men, because in my opinion if we only get good officers and good non-commissioned officers, the men will be forthcoming later on. With regard to the training of our men, the lecturer, Colonel Holden, and other speakers have already pointed out that one of the weak points of the

training at the present time is that the training of the recruits is far too long. In most places where recruits have six months' training there is very little ground where they can be trained in outpost duties or tactical exercises; in fact, as far as I can make out, most of the training of these recruits is on the barrack square, which has the result of making the men disgusted and stale. If the six months' recruit training could be curtailed by one or two months, and one or two weeks added to the annual training, it would be infinitely preferable. Under the present régime, with three weeks' training, it means that the musketry will have to be rushed through, which in my opinion would be most detrimental to a force which in time of war has to supply the Army with all its fighting strength. I am afraid I have already detained you too long, but there is one thing in conclusion I would like to say, namely, that having commanded a Militia regiment for over ten years I feel very keenly the present position of the Special Reserve, because I must say that I foresee great difficulties looming in the distance. Those difficulties, in my opinion, can only be surmounted by the military authorities showing more consideration to the Special Reserve than they have done to the Militia in the past. There is no doubt about it that different Governments and different military authorities have always treated the Militia as the Cinderella of the whole of the British forces, and I trust that in future they will show them more consideration if they really want this Special Reserve to be a force in being such as they require. It now only remains for me to offer to the lecturer, Colonel Watts, not only on my behalf, but on behalf of everyone here, our united thanks for the trouble he has taken to prepare and deliver his most excellent address.

and the ship was to be sent to the port of Vladivostok. The commanding officer of the ship said he had no time to go to Vladivostok, so he would go to the port of Amur. The commanding officer of the ship said he would go to the port of Amur.

RASPLATA.

("THE RECKONING.")

By Commander VLADIMIR SEMENOFF, Imperial Russian Navy.

Translated, by permission of the Author, by L. A. B.

Continued from May JOURNAL, p. 637.

CHAPTER IV.

ADMIRAL MAKAROFF'S ARRIVAL—A NEW SPIRIT—THE FIRST BOMBARDMENT FROM SEAWARD—PRACTISING THE SIMPLEST EVOLUTIONS WITH THE SQUADRON—ON BOARD A MAN-OF-WAR—SAD RESULTS OF LONG PERIODS IN THE RESERVE—MAKAROFF'S DIRECTIONS.

AT eight o'clock on the morning of 7th March the Commander-in-Chief of the Pacific Fleet, Vice-Admiral Makaroff, arrived at Port Arthur. As Vice-Admiral Stark was still in the *Petropavlovsk*, he hoisted his flag provisionally on board the *Askold*. When it was first seen there, many of our people took off their caps and crossed themselves. A feeling of solemnity seemed to have seized upon every one.

The cofferdam for the *Retvisan* had been completed some days ago, but when the attempt was made to put it in place it was found that it only covered the hole very imperfectly. The mighty turbines of the pumping vessel were unable to pump out the battleship. The defective parts had to be examined by divers and temporarily made water-tight. Just on the day of the new chief's arrival this work was successfully completed. The battleship floated, and was towed by tugs into the west basin, where it was secured between buoys close to, and to the northward of, the *Angara*.

"A good omen," was the verdict in the ward room. On the lower deck they said: "Do you see, no sooner is he here than everything goes right. He'll stand no nonsense, my friend. He makes everything go."

At first, of course, Admiral Makaroff was taken up entirely from morning to night with the taking over of his new duties. He had to familiarise himself with the local conditions and the

state of affairs generally, to have consultations with various commanders, etc. The very little free time at his command he utilised in going on board the various ships in turn. Naturally, he could not be expected to visit the *Angara* at once.

Makaroff's inspections were very short, and always of the same kind. The Admiral came on board, received the captain's reports, had the officers presented to him, and then greeted the men.¹ Then followed an inspection of the decks below, upon which the Admiral once more walked down the ranks. Every time he had a few words for some of the men. One man Makaroff would remember from a former ship, or some cruise together; another was asked what he had done during the last fight; or he started a conversation with one of the gunlayers. He would be asked by the Admiral how many rounds he got off during the action, and in what time, and whether he had been able to keep his sights on. In this he called for replies and opinions, and sometimes even argued it out with the man. It ended with: "Au revoir, my lad! God grant us a happy issue," and he moved on. There was nothing very remarkable or extraordinary in all this, but every word, every movement of Makaroff's, was at once known throughout the squadron. Although the Admiral had not as yet given any real proof of his capacity, his popularity rose, as if by magic, from day to day, or more accurately, from hour to hour. The great mass believed in Makaroff, believed that he was the right man in the right place. Whole legends arose about his alleged plans.

It did not matter that these legends generally proved to be false. If one did not believe them entirely, one was only too ready to believe them to be feasible, and that was very important. The squadron had at last found its proper leader, and its old spirit arose anew. It appeared to me as if my hopes were not deceiving me. The pressure of these last years had been incapable of completely stifling the spirits of the squadron. When its hour came it was bound to throw off all obstacles and to open up its path in its old strength and beauty. In these days my brave travelling companion of the Siberian express would not have dared to say: "It is all over with us."

"How about our guns? Shall we re-embark them, sir?" the boatswain asked me one day in that tone of mingled respect and familiarity with which a boatswain asks the executive officer about the captain's intentions.

"What guns?"

"Ours in the batteries."

"What do you mean?"

"I was only thinking, sir, that if they send us to the Cape—"

"What Cape?"

¹ Inspecting officers always call out "Good morning!" or "Your health, my men!" to which the whole crew shout back a prescribed reply in unison, and keeping accurate time.

"The Cape of Good Hope, to capture contraband. We can't do that very well without guns."

"Where did you get this from?"
"They all say it, sir. The Admiral has ordered it. Every cruiser, such as she is, has to be put to some use."

This was perhaps somewhat far-fetched, still, it was very fine.

From Vladivostok the news came that the cruisers had been at sea from 25th February to 7th March, but without any result. They had suffered the whole time from heavy snowstorms. A small Japanese steamer had fallen into their hands.

On the evening of 8th March, we "heard" the Japanese, that is, our wireless stations received unintelligible messages.

At dusk we saw from the *Angara* that both destroyer flotillas (all we possessed) were going out.

"Oh! This 'risk nothing' won't go down with old 'Beardy.' "—"Little Grandfather" is quite another fellow," was said amongst my messmates.

"Beardy" and "Little Grandfather" were terms of endearment¹ which had been bestowed upon Makaroff during his earliest days at Port Arthur.

Towards seven o'clock on the morning of 9th March, the first destroyer flotilla returned to Port Arthur. They had not succeeded in finding the Japanese Squadron. Instead of this they came upon a Japanese destroyer flotilla in the dawn, when they were already in sight of Port Arthur. Between them and the Japanese a hot engagement commenced, and at quite close quarters. They even fired surface-running torpedoes at each other. The *Vlastny* maintained that she had sunk a Japanese destroyer with a torpedo of this kind. In return she had her engine disabled by shell fire. Our losses were: the flotilla commander wounded, an engineer scalded to death, as well as one dead, and several wounded amongst the men. All news was invariably communicated to the squadron by "flag-wagging."

In the second flotilla, the *Reshitelny* and *Stereogushtchy* had no luck. They did not find the hostile squadron during the night and were cut off on their return journey. The enemy was twice as strong as they. Our boats tried to break through, and a hot fight ensued. They were very near boarding one another. One Japanese was said actually to have leaped across on to the deck of the *Stereogushtchy*. He killed one of the officers with a cut of his sword, but was instantly knocked down. The *Reshitelny* got through. On board her consort a torpedo exploded in the stern tube. Probably it had been struck by a hostile projectile or shell splinter. The boat's stern was terribly mangled. The Japanese at once turned away from the *Reshitelny* and threw themselves with all their might on the *Stereogushtchy*. They beat down all resistance and took her in

¹ The Admiral wore an exceptionally large beard.

tow, but when they tried to tow her away to the southward she sank.¹

Though the *Stereagushtchy* was lost, the first flotilla had also accounted for one of the hostile boats. The fight brought no victory, but also no defeat. At the most one could only be depressed at the thought that our destroyers were so worthless. Fully half their number took no part in the expedition. They were lying in the East Basin, making good small defects, which cropped up almost daily. Nor were they sufficiently trained for their special duties. The boats lost one another when they were out at night, they did not know how to find the enemy, etc., etc. All the same, this enterprise had been the first bright deed, and it therefore did not by any means produce a bad impression in the squadron. On the contrary, one was proud of it. The cause lay in a circumstance insignificant in itself, but which represented something so unheard of in Port Arthur that at first one could hardly believe it.

When the signal station on Golden Hill reported that our destroyers were engaged with the Japanese, the *Askold* and *Novik* at once went out in support. The *Novik* led.

"Is the Admiral by any chance going out himself?" every one asked, highly interested. The officers fetched their binoculars. On board the *Askold* Makaroff's flag was not flying.

"Well," it was said, "that is quite natural. He can't expose himself to such a danger. The *Askold* is, after all, only a protected cruiser."

"The *Novik* has hoisted the Admiral's flag!" shouted one of the signalmen.

There was great excitement everywhere. The men left their breakfast and rushed on deck, the officers fought for glasses. Doubt was no longer possible. At the only masthead of the *Novik*, this toy vessel, which looked more like a torpedo boat, the flag of our Commander-in-Chief was flying.

Exclamations of surprise flew through the ranks of our men. The officers clearly showed how greatly they were pleased.

"He wouldn't wait until the *Askold* was ready; therefore he goes out in the *Novik*. By Jove, this is splendid!"

In reality, Makaroff's decision was nothing at all extraordinary, but merely what ought to have happened. The old maxim "risk nothing" was buried at that moment, and a new principle arose in its place.

The destroyer action took place about 10 miles from Port Arthur. The *Novik* and the *Askold* did not arrive in time in spite of all their efforts. The *Stereagushtchy* had already sunk

¹ We learnt from the Japanese reports that the *Stereagushtchy* was half destroyed, and that all the officers as well as most of the men were killed. The survivors sank their vessel themselves by opening the Kingston valves.

when our cruisers reached the scene of the action. They at once started chasing the hostile destroyers. In doing so they ran upon the entire hostile squadron, which was steaming towards Port Arthur, and had to turn back. Happily, the two vessels were in full possession of their steaming powers. With our other ships this only figured on paper. The Japanese battleships and armoured cruisers could not catch the two cruisers. Only the "Greyhounds" were able for a while to chase them with more or less success.

We in the harbour heard with great concern that firing was going on out at sea, but both cruisers got back safely.

This return nearly became a triumphal progress. Thousands of men stood crowded on the decks of the ships, on the ramparts of the forts, and along the harbour embankments, and every one anxiously followed the movements of the *Novik*. The fast little vessel manoeuvred cleverly through the narrow passages in the entrance; but the general attention was not fixed on the ship herself. Every one wanted to see the proud flag of St. Andrew, with an admiral's distinguishing marks, which the cruiser flew at her masthead.

An accidental success in action would not have had the significance of this moment. The Admiral had conquered all hearts at one stroke and could henceforth be justified in speaking of "my" squadron. Every one was his, body and soul.

To this episode must undoubtedly be ascribed the grand composure with which the squadron underwent the bombardment which followed on the same day. It was perhaps not the only cause, but it certainly contributed towards it by the extraordinarily strong impression it made on the masses. All the same, our situation was by no means a good one.

The Japanese Squadron, before which the *Novik* and *Askold* had to fly, steered at first on a westerly course, as if it meant to pass Port Arthur. It soon got out of sight behind Liao-ti-shan Hill. A single cruiser remained off the entrance of the harbour, but outside the range of our forts. Soon after 9 a.m. there arose suddenly between the ships in the west basin a gigantic column of water. A sharp detonation was heard at the same instant, which had nothing in common either with that produced by the firing of a big gun or the explosion of a mine. Immediately every one left his work and looked around aghast. Again and yet again the same thing happened. All at once it all appeared clear to us. The Japanese battleships, which were circling about 8 or 9 miles from us, were firing at us indirectly across Liao-ti-shan. Not a single fortress gun could interfere with them. Evidently our Ministry of War, as well as that of the Marine, had, before the war, thought such a thing to be impossible. Otherwise someone would surely have built batteries to meet such a contingency, or have made the necessary preparations in the squadron for replying to such high-angle fire.

As soon as the bombardment commenced, Admiral Makaroff ordered suitable measures to be taken in hand at once. But this was no easy task, and could not be done in a few hours. The chart had to be divided off into squares, marks for laying on selected, posts of observation to be established, and a simple system of signalling from them drawn up. For all this several days were required. We could not help asking ourselves : what were we really thinking of before the war? It is curious how history repeats itself. In the Turkish war our infantry had to improvise for themselves wooden sights for the longer ranges and fix them on their rifles. Since then twenty-five years had passed, and again we see ourselves forced to improvise from our own resources additions to our gun sights for firing at very great ranges. Some ships were in any case unable to use high-angle fire. Their mountings were not so constructed as to allow the necessary elevation being given.

The Japanese evidently had suitable mountings and a trained *personnel*. Their shots were very well placed. A single shell would have sufficed to put any battleship out of action, as the projectiles struck with a very large angle of descent. The 11-inch mortars of the Japanese proved this at the end of the siege.

The hostile battleships manoeuvred without hindrance south of Liao-ti-shan. When each reached the right place, she quietly laid her 12-inch guns, and neither fleet nor fortress could make any reply to their fire.

The only escape from this deplorable situation would have been for us to go to sea. We had been in possession of Port Arthur for seven years before the war broke out. In all this time we did not manage to complete the grand scheme of deepening the inner harbour and the entrance. The big ships could only go in and out at high water. At low water the insufficient depth kept our ships more securely locked in port than the most powerful enemy. On 9th March low water at Port Arthur was at 9 a.m., therefore the Japanese had selected precisely that hour for the commencement of their bombardment.

The reader has surely had the experience at one time or other in his dreams of lying helplessly, while a heavy weight was threatening to crush him to death. This crushing weight could easily be thrown off if one had the use of one's limbs. But one is, as it were, tied down, unable to move a limb, and only one's thoughts are at work. And even these thoughts are not free. They can only ask : "How much longer can I bear this?" One would like to be rid of them altogether.

Such was our situation during the bombardment on 9th March. The word "bombardment" exactly describes it. There was no question of a fight. At other times the defender at a bombardment is able to reply shot for shot, even if in a less favourable situation than the attacker. Here it was, for one of the parties, merely a very convenient target practice,

free from all danger. The other party provided the living targets.

The bombardment of 9th March was my "baptism of fire." However, I won't bore the reader by describing what I then thought and felt. After a war, the first impressions of the enemy's fire have been described and minutely analysed by so many writers that I need not waste another word. I will confine myself to describing the events and my observations of others. I have conscientiously noted them in my diary.

I do not know how the crews of our squadron would have behaved two weeks earlier under such a bombardment. Their attitude on 9th March was so exemplary, that I have come to the conclusion that Makaroff's arrival and his short trip in the *Novik*, as just described by me, were the causes.

Against the 12-inch shell which came down nearly vertically, there was no protection on board any of the battleships, still less on board the *Angara*. But against the very small splinters of shell bursting near by, a bulkhead or merely the ship's side sufficed as a protection. Consequently, we ought to have ceased all work on deck and sent the men below. This was not done in a single ship. Of course, I mean only the ships I could see. We were lying so close together at our buoys in the west basin, that the space between the lines of ships was only a trifle over 200 yards, whilst there were only about 60 yards between ships in the same line. I was therefore able to observe a good many ships. And if a panic had broken out at some distance from us, it would have spread quickly to the other ships, crowded so closely together, and reached us. Nothing of the sort happened. Life on board the ships and in the harbour went on as usual. It had apparently been realised that after all it was impossible to defend ourselves, and therefore every one acted as if he did not notice the shell which was pitching around him. The chimneys of the workshops belched forth clouds of smoke and steam as usual, and in the harbour the daily busy routine went on. Tugs were towing about lighters and floating cranes, and the steamboats of the men-of-war were going hither and thither, some alone, some with row boats in tow.

This happened to be the very day on which the mounting of our 4·7-inch guns in the new batteries below Golden Hill was to be completed. Our men had already gone there in the early morning, and did not knock off work, although they were quite unprotected in the batteries. Towards half-past ten our steamboat took out the dinners of the working party as usual. When it returned and had come alongside, one of the men was led out, supported by others under his arms.

"What's up?"

"On our way out, sir," reported the coxswain, "a shell burst quite close to us. The cook's mate got a flesh wound. We have probed it; the bone is all right, and he can move his foot. He said himself: 'Don't make a fuss, but mind the

soup doesn't get cold, otherwise the men will swear.' We have bandaged him up well."

Happily, the wound was not serious.

Towards eleven o'clock the men went to dinner and the officers had breakfast. At that time the enemy's projectiles were making particularly good practice. I was standing on the upper bridge of the *Angara* when the *Retvisan* was struck by a shell. (The distance between her stern and our bow was between 40 and 50 yards.) The projectile only damaged her side near the port midship gangway. It burst here, and destroyed two boats that were lying alongside. One of them burst into flames. The pumping vessel *Silatch*, which was also secured there, was covered with shell splinters.

"That was a near shave," I thought; "half a dozen yards more to the right and the shell might have got into the after 12-inch shell-room."

On board the battleship people were running about excitedly. After a while she cast off her bow hawsers, and had her bow, which had gone down perceptibly, towed round to starboard by the *Silatch* into shallow water. We afterwards heard that the bursting shell had damaged the cofferdam covering her big hole forward. A few minutes later another projectile struck the *Retvisan*. This time she was hit on the starboard side (now facing south), near the water-line abreast of the after-turret. The armour held. When smoke and spray had disappeared we saw merely a brown spot where the shell had struck.

"The *Retvisan* has no luck," said the officer of the watch near me.

At this moment one of the servants announced that breakfast was ready, and I went down into our mess.

Towards the end of breakfast we organised a little *jeu d'esprit*. The first-class saloon on the upper deck was used as ward room. At the open door an orderly was so placed that he could see where the shell struck. After each explosion we had to guess where it had struck—in the water, on shore, to starboard, to port, ahead, astern, far off, etc., etc.—judging by the nature and force of the detonation. Every attempt to get a view through one of the windows at the sides was prevented by energetic shouts of "No cheating!"

The report of the umpire at the door decided.

It was fine to see the carelessness and cheerfulness of these heroes. The threatenings of death they turned into a harmless game. Such is the strength of patriotism. I wrote in my diary "Is it pride or love of glory that does all' this? If Makaroff were not here, and the old maxim, 'risk nothing,' were still in vogue, these people would probably be hiding behind traverses made of coal bags. Now they show off before one another. Each one watches carefully for one of the others to betray his emotions. They laugh at the young blue-jackets, who stoop when a shell splinter whistles in the air. These show no shame. They say: 'It came so suddenly,' or 'I was not looking out, and did it unconsciously.'"

Here the "suggestive" influence of a strong will over weaker ones was clearly shown. The former is able to exercise this influence, and the others really mean to do the same thing. They obey, not from fear, but for the sake of their consciences.

Suddenly there was a hit quite close. The explosion was so violent that a hand-bell on the table jumped up and rang.

I snatched up my cap and ran on deck. Happily, all had gone off well. The shell had pitched into the water about 20 yards off our port side, abreast of the forebridge. Its splinters had made a few holes in the boats and ventilators. On the bridge there was some damage, but no one was hurt. The Japanese were apparently again firing in our direction. The next projectile nearly grazed us, but did not burst. The water which it threw up simply swamped our deck. A group of men standing there were completely soaked.

The men shouted and laughed cheerfully.

"Have you ever had a Japanese bath?"—"Water is very different from splinters."—"If that had been a splinter my new shirt would have been spoilt."—"Hah, hah! he's in a funk about his new shirt."—"Naturally, his thick skull won't be hurt by any splinter."—"Just you wait. A splinter may hit something else besides the skull."

"Clear out!" called out the boatswain. "The orders are that no one is to be on deck who has nothing to do there. Clear out!"

The men moved on reluctantly. "What does he want? He himself goes on to the bridge with the gentlemen. Where are we to go? We have got to be somewhere. How did old 'Beardy' do it this morning? He said: 'If I fall, I give an example.' And we are to hide?"

On our port bow a shell burst just under the stern of the *Diana*. Her men were running about, and some screwed the fire-hose to the rising mains. Another shell plunged into the water alongside the *Kasan*, which was secured just ahead of us.

"That was nearly a hit," we joked. "Thank God! a miss is as good as a mile."

The *Kasan* signalled to us for a doctor. Her own was sick. They evidently had men wounded.

A "portmanteau"¹ hit the parapet of the mortar battery on Golden Hill.

When the flood was at half-tide, towards 1 p.m., and the squadron could have commenced to go out of harbour, the Japanese retired. Thank God! no ship was seriously damaged. The squadron lost about thirty in killed and wounded.

It might have been much worse. The ships of the squadron and the harbour craft, Government as well as merchant steamers,

¹ "Portmanteau" was the name at Port Arthur for the long Japanese shell. Does not such a projectile, 1 foot in diameter and over 4 feet long, look very like a portmanteau filled with explosives? They contained 106 lbs. of Melinite or Shimose. We had no shell of the kind.

were crowded together in the basins. The clear surface of the water was barely twice as much in area as the aggregate deck space of the vessels exposed.

At daybreak, towards 4 a.m. on 10th March, all the men-of-war began moving out to the roads. Admiral Makaroff had ordered this. On this occasion it was shown once more what a leader in whom his subordinates have faith, and who has faith in himself, can accomplish. Up to now, the tugs, both Government and private, had borne up the responsibility in moving our ships. It was so laid down in the rules and regulations elaborated at Cronstadt and approved by the Admiralty. In times of peace these rules may have been quite wise. The captains were too fond of working their engines, and this interfered with the masters of the tugs, who were not accustomed to this. But the result was that the whole squadron was unable to get out of the basins and into the roads during one tide. The resources of the port were too limited, and two tides had to be waited for—that is, it took nearly twenty-four hours to get to sea. Makaroff changed all this by issuing new regulations. Henceforth the tugs were merely to "assist" our ships in the manœuvres. They "helped" us to turn in the narrow parts, and "endeavoured with all their powers" to render us assistance in tight places. If they did their business well, they were not likely to be called to account for any damages. The captains, on the other hand, were enjoined not to shirk this responsibility. They had to keep in view their paramount duty of getting their ships out in the shortest possible time. To this end all available means were at their disposal. Whoever, with the best intentions, did not manage to carry out this task, merely showed his ignorance and inexperience. Whoever clung to the letter of the instructions from dread of responsibility proved himself culpable.

The Admiral developed this idea very fully at a meeting of flag officers and captains, at which the masters of tugs and the port officials were present.

The result was that the entire squadron went out of harbour on 10th March, during the early morning high water, in two and a half hours. When it was high water again that evening, it re-entered the port between 5 and 7 p.m. We hardly believed our eyes. Our young officers were beside themselves with joy.

"The tugs are working like Trojans. Look how smartly they come alongside, how quickly they carry out their job and then hurry off to the next ship."

These vessels richly deserved this praise.

The enemy had completely disappeared. Our squadron carried out evolutions as soon as it was outside. Admiral Makaroff had issued tactical orders immediately upon his arrival at Port Arthur. These orders contained rules as to the cruising and battle formations of the squadron, fundamental principles as to the use of the gun armament, and directions as to what ships were to do in special circumstances in action. Up to then

we had had no such orders. As the Japanese did not put in an appearance, these exercises on 10th March were carried out as in time of peace. They produced a sad result. Two battleships rammed one another. The *Sebastopol* was damaged. It appears that she was rammed right aft. However, orders were given not to talk about the incident.¹

"Those are the results of our being kept in Reserve so long," grumbled some of my messmates. "We want to go to war, and don't know yet how to keep in the wake of the next ahead. We are, after all, only floating barracks."

"Makaroff will make good all this."

"God grant that there may be time!"

Admiral Makaroff had brought with him, besides the constructors and workmen of the Baltic Yard, a number of other specialists. Amongst these was, for example, Colonel M—and several workmen from the Obukoff gun factory. All branches of the service received a fresh impetus. The cofferdam for the *Tsesarevitch*, the feasibility of which had hitherto been doubted, was taken in hand energetically. In place of the *Retvisan's* old cofferdam, which had been found useless, a new one was built. In the gun sheds there lay, quite unnoticed, a number of guns and part of their mountings which had been looted at Tientsin in 1900. From these several were picked out, missing parts of the mountings were made anew in the dockyard, and eventually there were forty new guns at the disposal of the land front. The mountings of the battery on Electric Rock were improved, increasing their arc of training by 5°. In the port a great deal was accomplished by volunteer artisans and divers of the Reval Salvage Company. The Admiral thought of everything and forgot nothing.

14th March became a "red-letter day" for me. I was invited to breakfast on board the *Petropavlovsk*. After breakfast the Admiral took me into his cabin and told me plump and plain, as was his fashion, what he intended to do for me.

"When I left St. Petersburg I heard that you were in command of a destroyer. I know you, and knew that you would not give up this appointment for any other. When I was getting my staff together I did not therefore count on you. Now you have got another appointment, but my staff, as allowed by establishment, is complete. Would you like to be attached to the staff as a supernumerary? After all, that is better than serving in a transport. It would give me much pleasure."

¹ The *Sebastopol* was rammed by the *Peresvet*. Luckily, she made no water. The result of the blow was only an insignificant crack in the outer skin plate. Besides that one of the blades of the starboard propeller was bent. This blade was afterwards exchanged by means of a bell-shaped cofferdam. The *Peresvet* twisted her stem slightly, and some water got into the foremost compartment. She was repaired. On the same day the *Sebastopol* rammed the *Poltava* very slightly, the latter also having a plate cracked.

I apologised for my candour, and replied as briefly. We were at war, and I did not like being attached to the staff without special functions. I did not aspire to high honours, and only asked to be appointed to a fighting ship, it did not matter which.

"I thought so," the Admiral laughed; "you are an incorrigible fellow. Unfortunately, no destroyer is free. Well, a vacancy will, no doubt, turn up somewhere. Go to Michael Paulovitch,¹ he has got something up his sleeve for you. It is a pity you won't come on the staff as supernumerary. However, that is your business."

"Very glad—I know all about it," said the Chief of the Staff, when he received me. "I have already told you off. You are going to the *Diana* as second in command. It is certainly no very grand billet. Your ship belongs to the "Goddesses" built in Russia.² No other appointment for you was vacant. You will have to work hard. There is an enormous amount for you to do there."

How true Admiral Molas's words were I only understood when I had been on board the *Diana* some days. My journal contains not a line about these days. There was so much for me to do that I hardly had time to eat and sleep. The cruiser had been commissioned on 30th January. Previous to this she had been eleven months in the Reserve. If on leaving Cronstadt (autumn 1902) she had carried a normal complement, she ought now to have had on board men belonging to two annual contingents, who had never gone to sea in her. These two contingents would aggregate about one-third of the complement. As a matter of fact, 50 per cent. of the whole crew were peasants dressed as blue-jackets. A single cruise from Port Arthur to Vladivostok and back was the entire sea experience of a good half of the remainder. Manners and customs had grown up amongst the men, which were anything but man-of-war-like. Even in barracks things were different. I could have imagined myself to be, not on board a warship, but in a small village. At every kind of work one never heard a proper word of command or a clear order. The petty officers "begged" the men to do this or that. Not even the boatswain knew how to act as a superior. He requested the "children" to go to the work in a friendly way. Everything was carried out in a hurry and superficially. I don't exaggerate in the least. These were facts. The *Angara* had certainly not received the best of the men of the various ships of the squadron, though these men were in commission, but her crew of odds and ends was, compared with that of the *Diana*, faultlessly trained. It was an

¹ Rear-Admiral Michael Paulovitch (son of Paul) Molas, Makarov's Chief of the Staff. He went down with his chief in the *Petropavlovsk*. (Amongst acquaintances the surname is rarely used.)

² *Pallada*, *Diana*, *Aurora*.—Protected cruisers of 6,600 tons, 13,000-H.P., 19½ knots (nominal), eight 6-inch and twenty-two 12-pounder Q.F. guns, 3 funnels.

endless trouble to eradicate the patriarchal tone which had grown up in the *Diana*, and to infuse some military spirit into the life on board. The dirt on board was incredible, especially in such holes and corners as a casual inspection might overlook. Such a result was quite natural after eleven months in Reserve. During that time the cruiser had become a floating barrack, but a good barrack it could never become. On board a ship's crew lives so crowded together and under such totally different conditions as compared to the shore, that order and cleanliness inside and outside are the first conditions of any well-being. Order and cleanliness can only flourish when the entire organisation of a ship in all its parts is in full working trim. To turn a ship into barracks is an impossibility. While in Reserve—of course, I don't refer to short periods for making good defects—every ship goes back. Slowly but surely the good tone and the activity of the *personnel*, as well as the good condition of the *materiel*, decline, until the ship ceases to be a man-of-war. Life on board then begins to resemble one of those long Polar nights, during which the strongest and most energetic men fall a prey to depression, however much they strive after artificial distraction. The monotony produces boredom, and boredom causes discouragement. Eleven months on board in Reserve means about the same thing as eleven months imprisonment *en masse*. I said that on board the *Diana* I could imagine myself in a small village. Such conditions as existed on board her can really only arise in prisons where supervision is lax and easy-going.

I broke with all these traditions, which had already produced bad effects. Of course, I had to demand many a thing of which the men had long since lost the habit. Consequently, there was a certain amount of reluctance. Happily, I was most energetically supported by the captain, who had only taken over the cruiser two or three months before I joined. The greater part of the officers also supported me with zeal and intelligence. This was especially important.

We could perhaps have brought the ship's company of the *Diana* to work by force, and perhaps even to learn this or that. But that would not have sufficed. It was necessary to make these indolent, dull-witted creatures grasp the utility of their work. They could not be left in the belief that all that was demanded of them was the mere caprice of all-powerful superiors, whom they were bound to obey in compliance with laws which they did not even know. Makaroff's arrival was of great help in all this. Gradually a change took place. There arose the spirit which leads to victory—faith in the leader at whose command one gladly faces death. It only remained to instil into the men the fact that death was not the main thing, but victory; that it was not sufficient to be able to die, but that one had to know how to fight. They had to learn to fight, and to grasp the necessity for keeping everything on board ship, down to the smallest detail, in good order and readiness.

for war. Gradually their dullness and discontent gave way to their instinctive love of fighting, and this had to be brought home to them.

It gave a deal of trouble, and there were some failures, but in time everything got better. The chief merit lay with my messmates. It was a labour of love to them to break down the stone wall between forecastle and quarterdeck. They mixed with the men, and missed no opportunity of making it clear to them that we all, from Admiral to recruit, had the same task. Nowhere is the connection between superior and subordinate more apparent than in a fleet. Nowhere is it easier to make this clear to the men. Equality in the face of death binds closely. In the army one can protect the lives of the leaders more than that of the so-called "food-for-guns," the rank and file; in a fleet this is not possible. The higher a man's position on board, the greater his personal danger. Between the commander of an army and the commander of a fleet there is a tremendous difference. The one directs the battle without being exposed to much danger to his person; the other leads his force himself into action in his flagship. The enemy's whole fire is concentrated on her, and he is the first to risk his skin. The sailor is not sent into action, but led into action, which is a very different thing.

And that is why Makaroff's "run" in the *Novik* produced such a tremendous effect. The consciousness that leaders as well as subordinates were exposed alike to the chances of being killed, can be made to exert an extraordinary influence, if the crew are properly educated up to it. If this has been done, then the men look upon every order received more in the light of valuable instructions coming from an older and more experienced comrade. When forced to work they don't do so because of the compulsion, but because they realise the object of the work. To introduce such conditions on board my cruiser was my keenest endeavour, and I was fortunate enough in finding amongst my comrades men of the same ideas.

Amongst the ships of the squadron the *Diana* was no exception. It is true that not all the ships had been kept in Reserve for eleven months before the outbreak of the war, but many were in a similar plight. The arrival of the beloved Admiral, who set such an example in his own person, produced a new spirit. The strenuous, zealous activity of all officers and other superiors made it possible to complete the theoretical education of the men much more rapidly than in times of peace. But nothing could replace the lack of practical sea training. The time which had been wasted in this respect was irretrievably lost. The peasants in blue-jackets' clothes and the gentlemen in naval uniform might become heroes, but not experienced seamen. Long years would have been required to turn our floating barracks into a squadron, ready for war. Our sad experiences on 10th March proved this clearly enough. Admiral Makaroff had taken up his command for the purpose of leading

us into action. He found himself under the necessity of first teaching us the simplest movements. The evolutionary exercises took place as in times of peace, without an enemy in sight. And yet ships rammed one another. Was this the fault of the captains, who now took their ships to sea for the first time?

It was too late to deplore these omissions, and there was nothing left but to give the squadron at the last moment such training as was possible.

When the officers of the *Diana* spoke to me about the manœuvring on 10th March, they always referred also with shame and indignation to a certain cruise which the squadron had carried out to Shantung and back on 30th January, soon after the ships had been brought up to sea-going complements. It was generally known as "the cruise of the Argonauts."

As regarded the gunnery training of the individual ships, things were not so bad. With the unanimous co-operation of all parties, from the captain to the youngest blue-jacket, a good deal could yet be done in this respect.

The Admiral developed this idea in some detail at the next meeting of admirals and captains. He said that every one was bound to devote himself with all his heart to his special task, no matter how trifling it might appear. Individuals were not to do this, simply because they were ordered to, but because they ought to be penetrated by the great importance of faithful devotion to duty. Only thus was any success conceivable. The gunlayers ought to be impregnated with the idea that one lucky shot might destroy the conning tower of a hostile battleship, and thus decide the battle. If the gunlayer knew this, he would ever keep it before him and be sure always to aim carefully. That was the bedrock of it all. If men were really determined, they would be able to do it.

"It is too late now to start on a systematic training," said the Admiral; "every captain, every specialist, in fact every officer who has charge of any department or part of the ship, no matter how trivial in itself, must hunt out with the utmost keenness any and every defect and work seriously at its removal. Let superiors and subordinates assist one another in this. Don't be afraid of making mistakes. Even a piece of work which starts on wrong lines and has to be given up bears fruit. Inactivity must remain barren of results, even if due to justifiable doubts as to the utility of the work. Remember that we do not know what time we have for our preparations. It may be months, it may be hours, nay, minutes, which still separate us from the final issue. Don't waste time by brooding over things. Bring out everything you may possess in knowledge, experience, and initiative, and do what you are able. What we can't complete will have to remain incomplete, but whatever can be done, must be done. Every one—understand me well—every one must be penetrated with the importance of his particular task. Even the least of us should realise how great

the responsibility is which our country has laid on him—God grant a happy issue!"

Every one set to work with frantic zeal. Never, not in the palmiest days of the Pacific Squadron, have I seen such enthusiasm. Only a portion of the west basin had been dredged before the outbreak of the war. The remainder was still shallow, and was uncovered at low water. The ships which were lying crowded together in the deepest part of the basin utilised these mud flats. Here they planted numerous small targets, varying in shape and colour, and fired at these from morning to night with sub-calibre guns. The gunlayers had thus an opportunity of practising laying on an object correctly, and of finding and maintaining the range, with frequent change of object.

(*To be continued.*)

OPINIONS AND CRITICISMS BY THOSE WHO
TOOK PART IN IT.

*Précis of Article in Streifblatt's Militärische Zeitschrift.
(January, 1909, pp. 119-134.)*

Contributed by the General Staff.

THE HEAVY ARTILLERY OF THE FIELD ARMY.

AT the beginning of the Russo-Japanese war, only one regiment of three brigades of 12-cm. howitzers was originally available on the Yalu. To this was added later a second regiment, which took part in the battle of Mukden, whilst the 3rd and 4th Regiments of Heavy Artillery, organised later, were not ready in time to be of use.

The initial skirmishes only concern small bodies, but the action in which they culminate always ends in a set battle. Even after a great victory both sides must refit, and the beaten enemy employs the pause in strongly entrenching himself, and as these pauses tend to be longer the larger the forces engaged, the probability of a struggle in a heavily fortified position increases also.

Hence heavy artillery must be available; flat-trajectory weapons would be useless, and moreover they would have to discontinue their fire at the moment the assault takes place. These conditions imperatively demand the employment of high-angle fire.

The same considerations apply to the employment of high-angle guns against the defenders' artillery. Indeed, the chief characteristic of this arm lies in its suitability for indirect fire, and if provision has been made for fire-control, high-angle guns can remain far in rear of the assailants' infantry, and can be directed against various targets without many changes of position.

Hence the functions of the artillery of the attack are classified as follows :—

- (a) In the artillery duel the field artillery¹ deals with all the visible guns of the defence, and the heavy artillery with those which are completely hidden.

¹It should be noted that the Japanese Field Artillery possesses no howitzers.

- (b) When the time for the infantry attack has arrived, both field and heavy artillery cover the advance by their fire.
- (c) Just before the charge, the field artillery fires on the newly appearing portions of the defenders' artillery, and the machine guns on the shelter trenches, whilst the heavy artillery undertakes the destruction of the shelter trenches themselves, and, incidentally, of their defenders. Both field and heavy artillery support the storming of the position, according to the requirements of the situation.

It would be incorrect to try and fire on the intrenched supports. Even if the trenches were located, this would require more ammunition than can be brought up. The chief task always remains the destruction of the shelter trenches of the firing line. If they lose their shape, they no longer cover the defenders, and the attack will succeed even if the reserves of the defenders try to stem it from the undamaged trenches in rear.

The expenditure of ammunition is calculated as follows :—

On the 23rd May, 1907, a shelter trench 50 metres long was entirely destroyed by 15-cm. howitzers firing 92 projectiles weighing 36 kilogrammes (say 79 lbs.), with a bursting charge of 1.5 kilogrammes (say 3 lbs.), at a range of 1,700 metres. So a shelter trench 150 metres long should require some 300 rounds to destroy it. Assuming the ammunition supply of heavy artillery as follows: battery, 192 rounds; regimental wagons, 480 rounds; ammunition column, 880 rounds; then the ammunition supply of a battery, with some assistance from the regimental wagons, is sufficient for the destruction of a shelter trench 150 metres long. The regimental wagons will suffice for the destruction of a trench 260 metres long, and the ammunition wagons for one of 460 metres. At twice the range we may expect the destruction of a company shelter trench by one battery.

High-angle guns of smaller calibre require a greater expenditure of ammunition, and are less accurate. So the 15-cm. howitzer will continue to increase in importance in field warfare. It is absolutely necessary that it should possess the same mobility as field artillery. Whether this is possible cannot yet be ascertained, but a 12-cm. howitzer will probably give better results.

A few more powerful low trajectory guns, such as 10-cm., are also a necessity against fortified posts.

Hence the heavy artillery of the field army should consist of several brigades organised as follows :—

2 regiments of 6 batteries 15-cm. howitzers = 48 guns.
1 regiment of 6 batteries 12-cm. howitzers = 24 guns.
1 "Abteilung" (3 batteries) 10-cm. guns = 12 guns.
with suitable ammunition columns.

The proportion of guns to rifles might be thus improved, not only by increasing the artillery but by reducing the infantry of

a division from, say, 9,600 to 9,000. A battalion might be reduced from 4 to 3 companies, and the 57 companies thus economised employed as artillery.

JAPANESE VIEWS ON THE ATTACK OF ENTRENCHED POSITIONS IN THE FIELD.

The principles are as follows :—

1. Indication of the point of attack.
 2. Choice of the first battle position.
 3. Careful reconnaissance of the fortified posts.
 4. Concentration of artillery fire to destroy these posts.
 5. Selection of a point of assault.
 6. Clearing the way for the column of attack.
1. The point of attack must be clearly indicated in order to avoid a dispersal of artillery fire. The chief duty of the artillery is to concentrate fire on the point of attack—a secondary duty is to keep down the fire of the enemy's artillery.
2. During the artillery action the infantry must endeavour to seize and fortify a position near the enemy, and make covered communications with their rear.
3. Reliance on the bravery of the troops must not allow us to dispense with a careful reconnaissance of the line of advance.
4. Concentration of fire on the point of attack must commence, at the latest, when the first battle position has been occupied, so that the engineers of the attack may be able to destroy obstacles. The want of common shell was much felt in the field artillery.
5. The further advance cannot be carried out by rushes, but is made by the hurried fortification of successive lines. The nearest of these lines will be about 100 metres from the fortified position. The advance from line to line will usually take place at night, and the lines must be connected by covered ways with the rear. The whole procedure resembles an advance by sap against permanent works, but is more rapid. The infantry must be thoroughly taught in peace time how to use entrenching tools.
6. The destruction of obstacles must precede the assault. In order to do this, the defenders must be driven from the breastworks by intense fire, and the storming of the position will usually be carried out before daybreak.

The campaign against China had misled us as to the principles of an attack on a fortified position, and peace manœuvres allowed insufficient time for such attacks. The attack on Russian positions required a carefully worked-out plan.

INFANTRY OPERATIONS IN THE KAO-LIANG (MILLET).

By the middle of July the kao-liang is higher than a man on foot, and by the middle of August higher than a man on horseback, the roads in consequence being very sultry. The following is a summary of an exercise carried out.

Before entering the kao-liang it must be thoroughly reconnoitred by climbing trees, etc. From these points, points of direction are carefully chosen and indicated. Henceforward the compass must be relied on, but assistance may be obtained from clearings, mounds of earth, etc. The advance is commenced in line of company columns in file, covered by scouts and connecting files at not more than 50 paces distance. A firing line should only be formed on approaching the enemy. Every opportunity afforded by clearings, etc., should be seized to check the direction. Flanking patrols are essential.

INFANTRY FORCED MARCH.

Report on a Forced March of about 36 kilometres (say 23 miles).—It should be noted that in forced marches the Japanese move alternately at the double and in quick time, changing every five or ten minutes. The distance was covered in six hours nineteen minutes, not including halts. The troops carried about 45 lbs. A halt of 35 minutes was made for dinner, and shorter ones, from 5 to 15 minutes, every two hours. Of the latter there were only two. The march commenced at 5.24 a.m. and concluded at 12.53 p.m., which gives 7 hours 19 minutes for the whole, or 5.2 kilometres (3.25 miles) an hour. This is not remarkable compared with the achievements of the Italian Bersaglieri or the English infantry, but considering the distance (23 miles) is not a bad performance.

THE DEFENCE OF LOCALITIES.

It should be noted that the Japanese preferred using villages which happened to be situated in the front of the line of battle for purposes of concealment rather than for defence.

ON TRANSPORT BY SHIP.

An essay by an infantry captain gives instructions on the behaviour of troops when embarking and when attacked by an enemy's ship *en route*; also measures to prevent sea-sickness.

EXPERIENCES OF THE JAPANESE HEAVY ARTILLERY BEFORE PORT ARTHUR.

No. 5 15-cm. Mortar Battery, at the left of the Japanese artillery position, commenced firing from a range of 3,680 metres (4,000 yards), and was later moved closer. During the siege it fired 2,957 rounds, expended as follows:

| | | | | | | | |
|------------|-----|-------------|-----|---------|----|------------|-------|
| No. 1 Gun, | 132 | high expl., | 310 | common, | 73 | shrapnel = | 515 |
| 2 " | 99 | " | 314 | " | 73 | " | = 486 |
| 3 " | 140 | " | 299 | " | 55 | " | = 494 |
| 4 " | 101 | " | 280 | " | 59 | " | = 440 |
| 5 " | 72 | " | 325 | " | 73 | " | = 470 |
| 6 " | 186 | " | 304 | " | 62 | " | = 552 |

giving an average of 310 common shell, 130 high-explosive shell, and 60 shrapnel—total, 500 per gun. Only the high-explosive

shells achieved any result. The shrapnel shells were underfuzed and could only be employed at the second position. Our (Austrian) 15-cm. mortar only carries 3,500 metres (3,800 yards), the shrapnel 3,460 yards; at greater ranges the 15-cm. howitzer would be employed. This carries 6,200 metres (6,750 yards), and the shrapnel 5,000 metres (5,400 yards).

Great attention must be paid to the platforms. This is easy in the case of high-angle batteries, as, it being unnecessary to construct cover, we are not compelled to seek earth that can be easily worked. In the case of Mortar Battery No. 5, the rammed earth under the platforms was washed away by the rain, because the drainage ditch was not properly made. In consequence, the beams of the platform were some of them washed away, and some of them, which lay unevenly, were broken. In the second position, willow logs were placed under the platform. This measure proved successful, especially as great care was observed in choosing the position. Still the rear of the platforms sank in time and had to be raised by rammed pebbles. Carpenters' tools should be carried for repairing platforms. A crowbar is useful when the platform rests on rocky ground.

It is of great importance to provide as many lines of fire as possible. No. 5 Mortar Battery, for its section of front 2,000 metres long, had provided five lines of fire, and in spite of many changes of target, found this sufficient. The author nevertheless recommends a greater number in future (German regulations only require three). The necessary *data* were arrived at by "firing plans," which were compiled from tolerably accurate maps. The plan must, however, be carefully compared with the ground, as in fortress warfare the defender can make numerous alterations.

It is a mistake to fire off the first round as soon as possible and to correct errors in the subsequent rounds. It is better to plot off the range, angle of sight, etc., carefully, and thus obtain the necessary *data* for laying out the first line of fire. One can thus obtain effect quicker and with a smaller expenditure of ammunition. No. 5 Battery was able to place its first round only 80 metres short of the target. Confusion was caused by the number of batteries firing on the same target. The possession of a watch with a second hand would have been of assistance in noting the time of flight (e.g., Austrian Training Manual: Definite targets are to be allotted to batteries, or they are to fire in a prescribed sequence). The difference in the ranging of individual guns was noted. At the end of the siege all six guns had decreased from 230 to 330 metres in range. The fact that the 15-cm. mortar decreases in range after heavy firing was confirmed at Port Arthur. This necessitated an increase of the angle from 2° to 6° . (According to our (Austrian) experiences, the ranges *increase* with the warming of the piece. The increase of the range is caused by the heating of the gun and consequent heating of the powder—the decrease of the range by the expansion of the bore. Consequently, at the commencement of

firing the range may increase only to decrease again as the firing is continued.)

Economy of ammunition is absolutely essential. Still, strong and well-concealed targets necessitate a great expenditure of ammunition. Economy must therefore be achieved by previous careful reconnaissance, a perception of suitable targets, and good control of fire.

War experience shows that the cases in which the battery commander can give commands by word of mouth are rare, and that it is more important that he should personally undertake the observation of fire not only whilst ranging but also during the subsequent rounds of battery fire. In any case the battery commander must chiefly concern himself with the observation of fire (Austrian Training Manual). The battery commander must control the ranging himself and observe fire himself. According to German regulations, the battery commander may, after the ranging is completed, leave the further observation of fire to a subordinate. The Russian regulations prescribe that as a battery commander cannot control his battery and observe fire at the same time, he is to leave the latter duty to his subordinates.

The mere repetition of the battery commander's orders by the senior section commander is not sufficient to prevent misunderstandings. The numerous corrections, often referring only to a single gun, necessitate careful watching of the gun detachments. In addition to this, measures for replacing casualties in men and material and preservation of order in the wagon line are comprised within his duties.

In high-angle fire batteries, whose men cannot see the results of their work, it produces emulation to announce any hits on the target at once.

The rapidity of fire is regulated by the necessities of the action, but effective fire is more to be aimed at than speed, as the gun detachments lose their composure, and observation of fire becomes indifferent.

In the 15-cm. mortars, therefore, we confined ourselves to firing one shot per battery in two minutes, *i.e.*, one shot per gun in twelve minutes.

The bursting point of the fuzed shells were very unequal, and the improvement of the fuzes is called for.

For communication the telephone was used with great advantage. If properly managed and in good condition, no second method of communication is necessary. The 78-mm. cable of the Heavy Artillery and Navy was excellent. It is desirable to give instruction in the principles of construction of the apparatus and in laying the wires, and also to practise a simple and clear pronunciation. Telephone operators must know the necessary military words and technical expressions.

The battery commander requires a telescope with a large field and simple construction for purposes of observation. It must be so constructed as not to attract the attention of the enemy. (The Germans have telescopes magnifying 10 diameters.)

NAVAL NOTES.

Home. The following are the principal appointments which have been made: Captains—M. R. Hill to "Vindictive"; J. C. Ley to "Hibernia"; G. M. Paine, M.V.O., to "Diamond."

The new first-class battleship *Temeraire* commissioned at Devonport on the 15th ult. for service in the 1st Division of the Home Fleet, where she will replace the *Implacable*. The new first-class battleship *Superb* commissioned at Portsmouth on the 29th ult. for service in the 1st Division of the Home Fleet, in which she relieves the *Formidable*. Both the *Implacable* and *Formidable* are to join the Atlantic Fleet.

The first-class battleship *Exmouth*, flagship of Admiral the Hon. Sir A. G. Curzon-Howe, K.C.B., C.V.O., C.M.G., Commander-in-Chief in the Mediterranean, arrived at Portsmouth on the 25th ult., paid off at that port on the 31st ult., recommissioned on the following day for a further term of service in the Mediterranean, and left again in the 5th inst. for her station.

The second-class cruiser *Scylla* arrived at Sheerness on the 11th ult. from Bermuda. She paid off on the 17th ult. at Chatham, and recommissioned on the following day for a further period of service on the North America and West Indies Station, and left on the 29th ult. for her destination.

Battle Practice of the Fleet.—The result of the battle practice in the fleet for 1908 was recently issued as a Parliamentary Paper (Cd. 4514), and the Admiralty, while pointing out that the conditions of the practice presented considerably greater difficulty than in 1907, note their satisfaction that such good results were obtained. It is also stated that owing to the different conditions of the practice, the system of calculating the points has been revised, and the points are not directly comparable, therefore, with those of 1907. The following is an abstract of the results of the firing with heavy guns for 1908:—

| Order of Merit. | Squadron. | No. of Ships. | No. of Guns | Average Points. | First Ship in Squadron. | Score. |
|-----------------|-------------------|---------------|-------------|-----------------|-------------------------|--------|
| 1 | Home Fleet ... | 21 | 268 | 285·2 | <i>Indomitable</i> ... | 562·5 |
| 2 | China ... | 4 | 60 | 219·7 | <i>King Alfred</i> ... | 296·8 |
| 3 | Mediterranean ... | 12 | 166 | 196·9 | <i>Glory</i> ... | 303·6 |
| 4 | Channel ... | 21 | 316 | 145·9 | <i>Drake</i> ... | 317·7 |
| 5 | Atlantic ... | 5 | 80 | 104·4 | <i>Albemarle</i> ... | 288·6 |
| 1 | Australia* ... | 9 | 90 | 196·6 | <i>Challenger</i> ... | 397·7 |
| 2 | Cape of Good Hope | 2 | 18 | 138·8 | <i>Pelorus</i> ... | 203·1 |

* Fired at fixed target.

Home.

In the Home Fleet, which is first in order of merit, 21 ships took part in the practice, the *Indomitable* making a splendid record with 562·5 points, the highest score in the Navy. The next best ship was the *Cochrane*, which, with her 9·2-inch and 7·5-inch guns made a score of 546·9 points. Only one other ship in the Navy made anything like a score approaching these; this was the *Foresight*, which with her 12-pounder 18-ewt. guns, recorded 523·8 points. Other ships in the Home Fleet which did remarkably well were the *Magnificent*, with 464·3 points; the *Dreadnought*, with 450·0 points; the *Essex*, a nucleus crew ship, with 348·2 points. In only two other squadrons did any ship make a similar score. In the Australasian force the *Challenger* made 397·7 points, and two gunboats on the Home Station did as well, the *Halcyon*, with 437·5 points, and the *Leda*, with 395·8 points; but all these three vessels fired at a fixed target instead of a towed one, the method used in the Home Fleet practice. The best two ships in the China Fleet, which came second in order of merit among the squadrons, were the *King Alfred* with 296·8 points, and the *Kent* with 285·7 points. It will be noticed that these vessels stand in order of merit after the seventh ship in the Home Fleet. Taking the same standard, the best two ships in the Mediterranean, the *Glory*, with 303·6 points, stands between the sixth and seventh ships in the Home Fleet, and the *Prince of Wales*, with 263·4 points, between the seventh and eighth. In the Channel Fleet, out of 21 vessels that fired, the *Drake* was top ship with 317·7 points, just under the sixth ship in the Home Fleet, and this was the only ship in the Channel Fleet that came above the Home Fleet average of 285·2 points. Only five vessels of the Atlantic Fleet fired, the best being the *Albemarle*, with 236·8 points. The *Pelorus*, of the Cape Squadron, firing at a fixed target, made 203·1 points, and next to the *Foresight*, among the scouts, was the *Pathfinder*, with a score of 268·5 points. Both these last-named vessels, it should be remarked, carried out their battle practice with nucleus crews and a reduced allowance of ammunition.—*Précis from The Times.*

Australia. *The Defence of Australia, By Colonel H. Foster (Director of Military Studies, Sydney University), Laid by Order before the Commonwealth Parliament.—I.* It is obvious that all preparation for defence must be based on the nature of the expected attack. If it be not, and fantastic pictures are painted of purely imaginary dangers, much energy and money will be wasted in preparing to resist attacks which will never be made, and diverted from directions where both could be usefully applied. Therefore, any discussion of the principles which should guide the defence policy of Australia must, to be reasonable, begin with an investigation of the conditions under which the supposed enemy will have to act. These conditions decide the nature of the attack and its strength.

Now, Australia is an island, and can only be attacked by sea, that is by a naval expedition, with, or without, ships carrying soldiers. These ships have to be collected in the enemy's ports, emerge from them, traverse the ocean, get in touch with Australian shores, and disembark men before military operations on land can begin. All this is obviously the province of sailors, and implies purely naval action. The problem,

Australia.

therefore, of attacking Australia is primarily a naval one; naval opinion is mainly to be relied on in dealing with it, and the duty of defeating the attack, or rendering it too risky and useless to be undertaken, lies on the navy. The consideration of the attacks which may reach Australia requires, therefore, some allusion to naval strategy. Space will not allow more than the mention of the general principles on which the British Navy will act in war. Its business is to protect the sea communications of the Empire, by dominating the naval power of the enemy. This power lies essentially in the battle-ship fleets, which it thus becomes the first object of the navy to seek out and bring to action, or to watch if they retire within defended ports. In either case they will be accounted for and rendered unavailable for aggression. Similarly our cruisers will hunt down those of the enemy, wherever they may be, and thus eventually drive him off the sea, except so far as single ships may occasionally elude pursuit or break out of their ports of refuge.

An enemy thus energetically assailed will obviously be in poor shape to devote any considerable part of his strength to aggressive action against any portion of the Empire. Any operation of that sort will be merely a raid, or a diversion, with the object of inflicting damage, or of distracting our efforts from the main operations. Any attack in greater force would gravely diminish the enemy's total strength, which, even if entire, will probably be none too great to enable him to hold his own. For the fact should be clearly grasped that no nation in the world can attack Australia without the certainty of having on its hands an immediate war with Great Britain; a serious matter for any country, however powerful, and one which will call for our enemy's whole strength to deal with. Any attack on Australia would be merely an episode in greater and more vital operations, and an episode which will have, at best, an indirect and secondary effect on the main war; while forming in itself a proceeding not devoid of serious risk, unless planned on a very small scale. Now, an operation with no direct bearing on the result of the war if successful, and one which weakens the available force in more important theatres of war, and also entails risk to the force engaged, is strategically unsound, and hardly likely to be undertaken by a wise combatant. If he did undertake it, he would make his success in the main war more difficult to compass, and would, in fact, be playing into our hands.

Most of those who talk of defence in Australia begin, correctly enough, by stating that her defence, other than local, depends on the navy. But they fail to draw the conclusion that the action of the navy is the main factor in determining the scale of the possible attack, and therefore of the necessary defence, both of which are treated as if Australia had alone, with her own resources, to cope with the whole strength of some powerful foe.

Australia is, by her geographical situation, in less danger of attack than any other part of the Empire. Japan, the nearest naval Power, is as far away as Turkey from the United States. From Sydney to Yokohama the distance is that of New York from Athens, Cape Town from Malta, or London from Delhi. Sydney is half as far again from San Francisco, and 12,000 miles from France or Germany.

Nor have foreign Powers in their tropical possessions in the Pacific many soldiers or resources for war. New Caledonia is to be given up as

Australia.

a defended base, and the Germans keep in New Guinea and the Solomons only a few Sikh police and a company of native infantry. Samoa and Tahiti are not garrisoned more strongly. Any expedition aiming at Australia must come complete from its home ports, and traverse thousands of miles of tropical seas, where crowding troops means sickness and inefficiency when landed. The French soldiers who conquered Madagascar were decimated by disease owing to their ill-health on crowded transports on the passage. The Russian fleet took eight months to reach Japan.

A hostile expedition against Australia may be of ships of war alone, or may comprise transports carrying troops. The former are necessary to escort the latter, but can in themselves effect but little damage against the territory they threaten. Their operations are limited to landing men to act ashore, engaging coast batteries with their guns, or bombarding any port they can reach. The difficulty attending these operations and their ineffectiveness can be shortly stated.

In the first place, ships of war cannot spare men from their crews ashore without weakening their efficiency for fighting an enemy's ship, an eventuality for which every admiral of a squadron, or captain of a ship, must be prepared. Every man has his own function to fill on board, and his absence on shore is an anxiety to the commander, especially as a landing party is sure to suffer loss in fighting, and may possibly be cut off from its ships by the enemy, or by bad weather preventing re-embarkation. No commander would land many men, or allow them to go far inland, unless the enemy had no ships which could attack him. This was the case when the naval brigades landed in the Crimea and South Africa, and is so when fighting savages, as when Sir Harry Rawson took a naval force to Benin. This will certainly not be the case with a naval force attacking Australia, and, therefore, at war with England, and liable to be assailed at any moment by a British squadron. The number of men which could be landed from any hostile ships which could reach Australia would probably not exceed 100 per ship. Besides this, it is almost impossible for the boats containing the men to reach the shore if under fire. A few men with rifles or a machine gun, firing from a concealed position, should make it very risky to land men, unless the ships were very close to the shore. In that case their own situation ought to be made untenable, especially if any sort of gun were available to the defence.

When we proceed to inquire what the landing party could do if it did get ashore, we find that the game would not be worth the candle. A few hundred men landed for a short space might perhaps take coast batteries from the rear, but could do little more than effect some hasty destruction of docks, shipping, or stores, or obtain coal and supplies. Their operations ought to be impeded gravely by any small local forces that could assemble. They would certainly not move far from their ships, running risk of being cut off, and would avoid entering towns and getting entangled in street fighting, which even a considerable organised military force would avoid. Landing parties from ships are thus seen to be an overrated danger to coasts and coast towns.

As to using ships' guns against coast batteries, this is an operation which naval men never consider as desirable, however much soldiers may dwell on its likelihood. Ships are built to fight other ships, and not shore batteries, which are difficult to hit, and less vulnerable when hit,

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with safe magazines underground, and bomb-proof cover for men. A ship, on the other hand, presents a large, well-defined, vulnerable target, whose range can be accurately found from the shore gun. History is full of instances of the insignificant damage done to shore works by ships, even in modern days of large guns. The small effect produced by a whole fleet on the defences of Alexandria in 1882, or by the United States fleet on weak Cuban batteries in 1898, may be mentioned. There is no doubt but that a very few medium guns in suitable works, fought by trained and brave gunners, will keep any cruiser squadron from entering a harbour whose entrance they command.

As to bombardment, this may be definitely passed over as a bugbear of popular imagination. The difficulty of finding the range and of noting the effect of the fire is great, the waste of ammunition, of which ships carry but a small supply, enormous, and the result absurdly disproportionate to the expenditure involved. In 1870 the Parisians grew to laugh at the German shells, and the bombardment of Ladysmith and Kimberley was very ineffective; although land batteries have a great advantage in shelling a town compared to ships. Naval men are not prepared to waste precious ammunition, which they will want badly when the inevitable encounter with an enemy's squadron occurs, in firing into the thick of a large area, where the effect of the fire cannot be judged, and must be limited. But, in addition, no bombardment, however damaging, can have any effect on the war, and is therefore a waste of time, effort, and ammunition, and a weakening of naval strength to little purpose.

From such considerations, those who have studied naval history, and considered future war in the light of the experience thus noted, with knowledge of naval policy and of modern ships, are agreed on three points:—

1. Ships should not engage coast guns.
2. Bombardment is useless and dangerously wasteful.
3. Landing parties from ships of war can effect little ashore.

Therefore, military force is needed for success against territory, and the only hostile attack to be feared in Australia is a combined naval and military expedition. The troops must be carried in transports, or unarmed merchant ships, for ships of war can carry but few soldiers without being gravely hampered for fighting, an eventuality for which they must be prepared on the passage. Now, merchant shipping is not drilled to use signals, or to "keep station" as it moves, and the ships will vary in speed. Being thus quite incapable of steaming in any sort of formation, the expedition will form a straggling mass of ships, unable to offer resistance if attacked. Their numbers will also make the expedition more liable to detection as it moves than the cruiser squadron would be if alone, especially as its progress will be much slower. Cruisers have often a speed of 20 knots and over. Of foreign merchant ships only some few Atlantic liners are as fast. No Japanese liners exceed 16 knots an hour, except one, of 18. The number of vessels increases the difficulty of coal supply, too, which will be severely felt by all hostile ships moving over the ocean in war time. The expedition will have to be accompanied, or met, by colliers thus adding to the risk, and causing delay. The slower rate of progress of a combined expedition, comprising cruisers and merchant ships, makes

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the voyage longer, and interception more likely. A British squadron will be on its track, and may arrive on the scene before the troops are ashore. Even if they have landed, their home communications will be infallibly cut off when the escorting squadron is overpowered or driven away. A military force without communications, by which to receive reinforcements, ammunition, stores, and orders and news from home, is in an unpleasant predicament. Its operations will languish, and its failure and ruin are hardly to be averted.

The risk and difficulty of moving troops oversea have made expeditions rare, except when made by the superior naval power. The weaker has seldom made the attempt, and when it has the result has been disastrous. These considerations lead to the conclusion that no enemy will be unwise enough to send a large force in transports against Australia, or that if he does he will suffer for it. That the navy is, and will be, strong enough to act correctly may be taken as certain. Exactly three years ago the responsible Minister, speaking for the Government, said definitely :—

"The duty of the Admiralty is to safeguard the country and its dependencies from sea attack, and to protect its commerce. It is a responsibility it does not underrate. I am here, on behalf of the Board of Admiralty, to claim that we are ready to carry out our liability to the full."

This does not preclude the possibility of an enemy sending a small cruiser squadron to effect raids of a temporary character, but their effect cannot be great, and such a raid must be of the nature of an evasion and a surprise. Any possible expedition must consist of a small number of ships, and can, therefore, not land a large military force. The matter has been summed up in a few terse words by Sir George Clarke, late Governor of Victoria, one of the greatest authorities on Imperial defence. He wrote :—"It is, no doubt, impossible to blockade a port so completely as to prevent the occasional and clandestine escape of individual ships. The idea that evading ships can engage in territorial attacks is without foundation. With a superior British force in their track, fugitive raids are the limit of the offensive action possible."

Sir Charles Dilke, a deep student of the Empire and its defence, wrote :—"While we have command of the sea no naval expeditions could be sent off, without utter recklessness, by an enemy not in possession of coaling stations near the place to be attacked, to form bases for naval operations. The part of our navy being to beat the enemy's fleet, and thus blockade his bases, and destroy his chance of acquiring fresh ones, the part of our combined expeditions will be to capture his existing bases, which could be used as bases for attack on the colonies. Colonial forces might well supply the necessary troops."

This points to the best defence of Australia being in attacking the nearer ports of the enemy. This idea is emphasised by a great authority, Captain Mahan, who says :—"However defensive in character a war may be, the assumption of a simple defensive in war is ruin." In another place he says :—"Unless correct appreciation exists, it is hard to silence the clamour for simple local security, which is apparent and not real." How true this is can be well appreciated in the defence arguments and proposals to be heard in Australia to-day.

(To be continued.)

France. The following are the principal appointments which have been made:—

Capitaines de Vaisseau—A. L. Huguet to "Liberté"; B. M. Morier to "Amiral-Aube." Capitaine de Frégate—M. I. Louël to "Javeline" and command of 3rd Ocean Torpedo Flotilla.—*Journal Officiel de la République Française.*

Naval Construction during 1908.—Naval construction for war purposes, judged by the results of the year 1908, seems to be generally on the decrease, with the exception of one of the great Powers, namely, Germany. Russia and Japan have not launched a single vessel of importance, and England is much below her average of recent years, as is also the United States, while France only launched one armoured cruiser.

Of seven of the great Powers, five are behind their annual production, the two others, Germany and Italy, show a considerable increase. It is true that the results of a single year do not give a true indication, as the construction of a large ship takes several years, and it is unfair to assume the date of launching as a guide, and a period of years should be taken to arrive at a satisfactory conclusion.

It is incontestable that at the present moment the German Navy is rapidly increasing. In the year 1907, on account of the changes introduced in the ships projected, the production was small; but in 1908, on the other hand, it reached a figure which has only been exceeded by the English and American Navies at certain epochs. Germany, in fact, launched last year four battleships, one armoured cruiser, and two protected cruisers, with a total displacement of 92,476 tons, a figure which the French Navy has never equalled even in its palmiest days. It means that Germany alone in 1908 produced two-fifths of the total warship production of the whole world, and the ships now actually under construction in that country foreshadow an annual effort almost equal to that of last year.

The increase in the tonnage of the British fleet in 1908 has only been about one-half that of Germany, namely, 42,300 tons, representing two battleships of 19,250 tons, and a cruiser of 3,300 tons. One has to go back to 1900 to find a lower figure, when, owing to a strike which paralysed the shipbuilding industry, only 35,000 tons of new construction were added to the British fleet. In the past twelve years the annual production in Great Britain has exceeded 100,000 tons, and the ships now under construction do not indicate that this mean figure will be reached during the coming year.

In the United States the production in 1908 is less than that of the ten preceding years, only reaching 32,000 tons, represented by two battleships, but the proposals actually submitted to Congress indicate a considerable rerudescence of activity.

Italy comes next in order to the United States: she launched three armoured cruisers in 1908, representing 27,496 tons, which is not an exceptional figure, as in 1907 two battleships were launched.

The French Navy, which comes after Italy, has simply launched the *Waldeck-Rousseau*, of 13,780 tons. It is the lowest figure of new construction in France for the last 20 years, and, nevertheless, the two preceding years were hardly more favourable—28,000 tons in 1907, 15,182 tons in 1906, showing the production in France in 1907 and 1908 to be

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inferior to that of Italy by 7,000 tons. Thus not only are we allowing ourselves to be out-distanced by Germany and the United States, but also by Italy, which holds the sixth place among the maritime Powers. It might, perhaps, be said that Japan has not launched any vessel of importance since 1908; this is so, but in 1907 she put afloat 55,000 tons, in 1906 41,000 tons, and in 1905 50,500 tons, consequently, Japan has already an advance over us that it will be difficult to recover. We are, therefore, now actually placed in the sixth rank by the increases of late made by the other maritime Powers.

The production in England, Germany, the United States, Italy, France and Japan does not represent the total output of the whole world: In 1908 a battleship of 19,000 tons, destined for Brazil, was launched in England; Denmark has launched a small battleship of 3,680 tons; and Austria one of 14,600 tons.

The total production in 1908 of large vessels is, therefore, 246,182 tons, representing 11 battleships = 178,496 tons, 5 armoured cruisers = 56,036 tons, and 4 protected cruisers = 11,650 tons.—*Le Temps*.

Précis of M. Chaumet's Report on the Naval Estimates: Suggested Economies.—M. Chaumet considers that without heavily adding to the budgetary charges, it is quite possible to increase the power of the fleet, and that by a methodical reorganisation better results can be obtained. Partial reforms, however, will always remain insufficient, and no serious and lasting progress can be made unless a fundamental reform of the existing obsolete organisation is carried out.

In regard to the shortness of men in the fleet and the flotillas, many of the present vacancies could be filled, in his opinion, by men withdrawn from ships in the reserve, as well as from ships on distant and Colonial stations. He is also in favour of the scheme for recruiting for the Navy in the Bill which was elaborated by M. Thomson, the late Minister of Marine. According to this the *Inscrits Maritimes* were accorded the benefit of the two years' law. While it would place at the disposal of the Minister of War a strong contingent not required by the Navy, it would encourage long service engagements for service in the fleet, and permit of retaining for a still longer period the Petty Officers, who have been trained at a great cost to the State, and since Parliament has voted an additional two million francs (£80,000) to raise the pay of the Petty Officers, the reform can be carried out without new credits.

There are many ships which no longer have any fighting value, and as all the resources at the disposal of the Naval Authorities ought to be concentrated on the best units, these obsolete ships should be sacrificed in order to make the remainder as powerful as possible. Thus it is proposed to spend a sum of 3,880,000 francs (£155,200) on the repairs of the protected cruisers *D'Assas*, *Protet*, *Pascal*, *Infernet*, *Linois*, and the aviso-transport *Mythe*; but as no definite decision has yet been arrived at, M. Chaumet hopes that the Department will not sanction so costly and useless an expenditure.

It is a matter of regret, he continues, a regret shared by many naval officers, that so much money should be expended on the coast-defence battleships stationed at Cherbourg. These ships cost 1,499,788 francs (£59,991) yearly, and they absorb more than a thousand men, not

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to speak of the money expended in keeping them in repair, which for the years 1905, 1906, and 1907 amount to the respectable sum of 2,242,918 francs (£89,716). The General Staff, however, considers that "in time of war these nine ships would form a second line squadron capable of rendering valuable service, especially after a general action in the ocean, when the enemy's fleet would be weakened, no matter what the issue, by material injuries, exhaustion of ammunition, and loss of personnel. The coast-defence squadron might then be able to act with effect against the enemy's ships thus enfeebled, and cut them off from their ports. While, if an action was fought within their steaming radius, the squadron would be an important addition of strength on the field of battle." M. Chaumet does not agree with this view; he holds that it would be the height of folly to expose these "*Chavirables*" (Capsizables) of 5,000 to 7,000 tons to a conflict with the large modern battleships, of which the offensive force of the enemy would certainly be composed. If the French first line fleet were beaten it would be inconceivable that these ships would be able to turn the scale against the victorious enemy. At present millions are being expended to maintain a second line squadron, while the first line, on which depends the chances of decisive success, is neglected. Far better would it be for France, in his opinion, to prepare for victory by increasing her offensive power than troubling herself how best to minimise the effects of a defeat.

Naval Divisions on Distant Stations.

M. Chaumet considers that the money now expended in maintaining naval divisions on distant stations could be better utilised. Although they have been reduced, yet the divisions in the Far East, Indo-China, the Pacific, and Indian Ocean, still absorb not less than 3,518 men to man them, the cost of keeping them in commission, exclusive of repairs, being 6,512,516 francs (£260,500). To this must be added the expense of sending out relief crews and bringing men home, and the invaliding and loss to the service of men whose health has broken down by service in unhealthy climates. It is evident that in case of war the cruisers and despatch vessels maintained in China and the Pacific could not engage in a struggle with the naval forces of Japan and the United States. The work, therefore, carried out by these divisions is merely policing Colonial waters and showing the French flag in foreign countries. If it is not possible to suppress these divisions altogether, it should be possible to reduce their cost. Why maintain in the Far East, continues M. Chaumet, the three cruisers *Bruix*, *D'Entrecasteaux*, and *Alger*. For a commencement the latter could be recalled; she is an old vessel without protection, whose presence anywhere is not of a nature to raise the prestige of the French Navy. By bringing her home, 381 men would be released for other duties, and an economy of 731,600 francs (£29,264) would be effected. The gunboat *Décidée*, on the same station, is worn out; by putting her out of commission another 100 men would be set free, and 179,800 francs (£7,192) saved. Nor is it necessary to keep the two river gunboats *Argus* and *Vigilante* constantly lying off Canton, one would suffice, and an economy of 80,000 francs (£3,200) and 45 men be effected by placing the other in the reserve. At Saigon the old battleship *Redoutable*

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is kept in the reserve; she has long been quite obsolete, yet a crew of 194 men is kept on board her, and she costs annually 217,248 francs (£8,689). There remain two armoured gunboats with reduced crews, an aviso-transport, the *Manche*, a small gunboat of 495 tons, and three armed launches for river work, out of commission. There is something truly imposing in the amount figuring in the Budget for the staff of the Rear-Admiral, who is Commander-in-Chief of this powerful squadron: 173,500 francs (£6,940).

But it must not be overlooked that there are flotillas in Indo-China. Flotillas of torpedo boats and flotillas of submarines. They are even more costly still, 1,667,775 francs (£66,711), while their crews amount to 875 men. These flotillas consist of 4 destroyers, of which one is in reserve, and 10 first-class torpedo boats, six of which are *en disponibilité* and four in reserve. In addition, at Saigon there are 8 torpedo-vedette boats, whose field of action could not extend beyond the mouth of the river, and which could with advantage be replaced by a mine field. These destroyers and torpedo boats might, perhaps, harass a hostile squadron, but they would certainly be paralysed by half-a-dozen such vessels of the enemy, and they are certainly incapable of defending Indo-China. With regard to the submarines, insufficiently equipped as they are, they are practically *hors de combat*, and could not possibly attempt an attack with any chance of success. M. Chaumet suggests that the Indo-China flotillas could well be suppressed, as the Chamber, with the consent of the Minister of Marine, has done with the flotilla at Diego-Suarez (Madagascar).

So again with the small Pacific division. The second-class cruiser *Catinat*, the senior officer's ship, is to be replaced this year by the *Jurien de la Graviere*; but why replace her at all. No other nations maintain naval forces in the Pacific, and the modern aviso *Kersaint* is quite sufficient to show the flag in New Caledonia and the New Hebrides, while the gunboat *Zélée* can perform the same duty at Tahiti and its dependencies. By withdrawing the *Catinat* and paying her off, about a million francs (£40,000) would be saved. Far better would it be to organise flying squadrons to show our flag at intervals in different parts of the world; but while waiting for the creation of these, cruisers returning home from China could visit the American coasts, passing through the Straits of Magellan. There would be an additional expense incurred for coal, it is true; but on the other hand, the Suez Canal dues would be saved. In the Indian Ocean we maintain the aviso transport *Vaucluse* and the gunboat *Surprise* at a cost of 480,249 francs (£19,250) and an employment of 253 men. The men and money could both be better employed.—*Rapport par M. Charles Chaumet (Budget Général de l'Exercice, 1909, Ministère de la Marine).*

United States. *Report on Yards and Docks.*—Reiterating the need for more civil engineers, Chief of the Bureau of Yards and Docks Richard C. Hollyday, U.S.N., in his annual report, says that the Bureau is constantly hampered by the shortage of officers. There is a constant demand for additional civil engineers at the various stations which the Bureau is often unable

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to supply. A civil engineer officer, in his opinion, should be available at every station where the Bureau has duties. Again the Chief of the Bureau calls attention to the disproportionate rank of the civil engineers in contrast with that of other corps. Under the Army table, low rank means low pay, and that the civil engineers may receive the same benefits as other officers, their rank should be fixed as follows: Five captains, five commanders, and the remainder of such rank as is held by the officers of the line of similar date of precedence. It is recommended that Congress place the Bureau on the same basis as the Bureaus of Navigation, Ordnance, Supplies and Accounts, and Medicine and Surgery, in the matter of having an assistant chief of its own technical corps.

The cost of living having increased not less than twenty per cent. since the present basis of salaries was fixed, the hope is expressed that Congress will afford proper relief. The efficiency of the Bureau's force is impaired by want of room, and an approximate increase of ten per cent. in the salaries of all clerks is recommended. Employés paid under appropriation for the civil establishment labour under the disadvantage that their pay cannot be increased without the consent of Congress, and consequently the Bureau has been hampered, especially in obtaining and holding competent men to superintend the consolidated power plants. The increase in electric power consumed, together with the consolidation of all plants under the department, necessitates the employment of an experienced electrician, who must be educated and trained also in the management of steam boilers and engines, air compressors, and the various distributing systems. To provide that proper attention be given to plans and specifications for public works coming before the Bureau, the recommendation is renewed for an increase of 10,000 dollars over the amount appropriated for the present fiscal year. The Bureau finds itself handicapped by its inability to employ a sufficient number of high-class technical assistants.

The small and entirely inadequate appropriations available for this year are noted. No extensive improvements have been made at the insular stations, and the bulk of the expenditures at such stations has come from the Bureau's current appropriations, already insufficient to take care of the general maintenance and repair work on the home navy yards. Many pages of the report are given up to detailed statements of the work done at the various navy yards during the year and the description of work required for the next year for which appropriations are asked. The estimates for the navy yards and stations covering matters under the cognisance of the Bureau include these amounts: Public works (including repairs and preservation), 9,811,730 dollars; maintenance, yards, and docks, 1,500,000 dollars; contingent, yards and docks, 30,000 dollars; total 11,341,730 dollars.

It is hoped that more liberal appropriations will be made for the coming fiscal year than last, when, although the Bureau's estimates were for 9,681,730 dollars, appropriation of only 4,659,400 dollars was made—less than half the sum requested, which covered only the improvements deemed absolutely necessary. Progress on the consolidation of heating, lighting, and power plants in the navy yards has been delayed by lack of funds, only one-half the sum necessary having been appropriated by Congress. The necessity of additional dry docks is again mentioned. The increased size of vessels now under construction will make larger dry

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docks necessary. There is a shortage of funds for the making of current repairs. There is increased cost to the Government occasioned by allowing defects to exist for a length of time. If corrected as soon as discovered, general decay does not set in; otherwise, as in some cases, complete renewal has to be made. Unless provision is made for the employment of a clerical and technical force under "civil establishment," there will be a particularly heavy drain upon the appropriation for maintenance. While appreciating the substantial increase made at the last session of Congress, which permitted better care of the various establishments than formerly, the Chief of the Bureau sees the need of further increasing this appropriation to the full amount estimated in the last annual report. In the list of expenditures in the year, the Mare Island Navy Yard is at the top, with a total of 763,896 dollars; Charleston is second with 721,235 dollars; Portsmouth is third with 703,210 dollars; and Norfolk is fourth with 608,114 dollars. The lowest sea coast yard was that of Port Royal, at which was spent only 2,629 dollars.—*Army and Navy Journal.*

MILITARY NOTES.

The following are the principal appointments which have been made:—

General—Sir Ian S. M. Hamilton, K.C.B., D.S.O., to be Adjutant-General to the Forces (Second Military Member of the Army Council). Lieut.-General—Sir Charles W. H. Douglas, K.C.B., to be General Officer Commanding-in-Chief, Southern Command. Colonels—R. C. A. Bewicke-Copley, C.B., to Command 17th Infantry Brigade (Irish Command), with temporary rank of Brigadier-General; C. T. McM. Kavanagh, M.V.O., D.S.O., to Command 1st Cavalry Brigade (Aldershot Command), with temporary rank of Brigadier-General; F. G. Bowles to be Chief Engineer, Eastern Command, with temporary rank of Brigadier-General; C. V. F. Townshend, C.B., D.S.O., to Command Orange River Colony District, with temporary rank of Brigadier-General; Sir R. A. W. Colleton, Bart, C.B., to Command Transvaal District, with temporary rank of Brigadier-General; E. Hegan, C.B., to be Colonel-in-Charge of Cavalry Records.

India.—Major-General—C. G. Mansell Fasken (*Indian Army*) to be Colonel of the 52nd Sikhs (*Frontier Force*); R. I. Scallan, C.B., C.I.E., D.S.O., Indian Army, to be Secretary, Army Department, Government of India.

The 400th Anniversary of the Raising of the Honourable Corps of Gentlemen-at-Arms.—An interesting anniversary was that of Monday, the 17th ult., when the Gentlemen-at-Arms celebrated the raising of their Corps by King Henry VIII.—one of that King's earliest acts after ascending the throne in 1509. It is the second oldest bodyguard in existence, the oldest, although only by a few years, being the *Guardia Mobile* of the Popes, which was formed by Pope Innocent VIII. in 1485. The Papal Swiss Guards might also perhaps claim to be senior, for they were

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originally raised by Pope Julius II. in 1505; but they have not had an absolutely unbroken existence such as the *Guardia Mobile* and Gentlemen-at-Arms can show, for in 1798, when General Berthier, at the head of the Republican Army, took possession of Rome, they were disarmed and disbanded, the aged Pontiff, Pius VI., dying a prisoner at Avignon. His successor, Pius VII., concluded a concordat with Napoleon, then First Consul, and one of his first acts in 1801 was to reconstitute the Swiss Guards. The breach of continuity was thus an exceedingly short one, but it exists nevertheless.

At various times since their creation, the Corps were designated the "Men of Arms," "Spers," and "Gentlemen Pensioners." It originally consisted of a Captain, a Lieutenant, and fifty gentlemen of noble blood, the first Captain of the Corps being Henry, Earl of Essex, K.G., and under him they were present at the battle of the Spurs in 1513. They took part in all the Court ceremonies of the time, and accompanied the King to France, and were present at his celebrated interview with King Francis I. on the Field of the Cloth of Gold. In 1526 a Standard Bearer, a Clerk of the Cheque, and a Harbinger were added to the list of officers, their Captain at that time being Sir Anthony Brown, K.G., who seems to have been the only commoner who ever commanded the Corps. With the Yeomen of the Guard and the Militia, it was for long the only standing force tolerated in the kingdom.

Though originally a purely military body, the Corps seems during the reign of George III. to have become almost civilian in character, previous military service not having been considered essential, and appointment to it having been purchaseable; indeed, it is stated that when Her late Majesty came to the Throne there were only three of its members who had previously served in the Army. In 1862 the Corps was reorganised, purchase was abolished, and appointments confined to officers who had held commissions in the Army or Marines, and all applicants were required to have seen active service and to have received a medal. The Corps now comprises a Captain, a Lieutenant, a Standard Bearer, a Clerk of the Cheque and Adjutant, a sub-officer, and forty gentlemen-at-arms. The Captain, who is *ex-officio* one of the Gold Sticks, is always a person of rank and distinction; the office is now a political one, and is relinquished on a change of Ministry. Unlike the *Guardia Mobile* of the Popes, in which noble birth is an indispensable qualification for enlistment, and whose ranks are filled by the scions of the oldest and noblest families of the Roman aristocracy, military merit is alone now recognised as a necessary qualification for membership of the distinguished bodyguard of the English Sovereigns.

Austria-Hungary. *The Austro-Russian Frontier Territory.*—In view of the possibility of a future war between the Habsburg Monarchy and the Empire of the Tear, the *Allgemeine Armee-Correspondenz* gives a brief glance at what will probably be the theatre of the future struggle. For Austria the frontier towards Russia, viz., Galicia, is where her troops must be concentrated and from which operations must be commenced. That Austria-Hungary, with her powerful army ready to move, will forego the attack is not to be accepted for one moment. To be able to attack is the advantage which falls

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to the most concentrated army, to the force most prepared to strike a blow. Moreover, the lessons of war teach that all the advantages, especially those of freedom of movement and moral superiority, fall to the attacker. Austria-Hungary has provided herself in Galicia with two strong bases in the fortresses of Cracow and Przemysl. The network of railways has been built entirely from the best strategical point of view. Two great trunk lines run through Galicia : the more northern from Cracow, over Tarnow, Przemysl and Lemberg to Tarnopol ; the more southern along the northern foot of the Carpathians, running somewhat similarly as the first. The two main lines are connected with Hungary by no less than six mountain roads over the Carpathians, which are linked up with the whole network of main roads, while not less than nine lines of rail lead to the Russian frontier. It must therefore be confessed that Austria-Hungary has provided a most excellent base for the strategic attack.

Russia has, as is known, during the last thirty years, massed large numbers of troops in Poland against Austria-Hungary, which in the main are divided into two forces, grouped : 1. In the so-called Polish Fortress Trilateral, Warsaw-Iwongorod-Brest. 2. About Kieff, Jitomir, and Berdischeff. Between the two districts lies the immense swamp and forest territory of the Poljessja (to the north of Volhynia), which, almost without villages and roads, is in any case almost impassable in spring. The Russian railway system has during the last ten years been immensely improved, and the lines, like the Austrian, have been constructed particularly with an eye to their strategical value. But there are still great gaps, and the system cannot in any way be compared with the Austrian. Russia suffers in regard to her preparation for war from the extraordinarily large stretches of country which cannot be completely bridged over even by an extensive building of railways. Running to the south from the strategic Kieff-Warsaw railway are two cross-country single lines, but taken altogether the communication with the Galician frontier can scarcely be considered satisfactory. These conditions, in conjunction with the slowness and ill-managed methods of movement of Russian troops, as shown by the Japanese war, as well as the disposition of the Russian military authorities to adopt a waiting attitude, all point to the conclusion that an offensive campaign on her part is extremely unlikely. Should a struggle come sooner or later, it is probable that she will stand on the defensive in the Trilateral (already mentioned), and there await the attack of her enemy. The time which she would hope thereby to gain would presumably be utilised in assembling at Kieff a second large army drawn from the interior of Russia. This army would then be on the right flank of the Austro-Hungarian forces which would be operating against the Trilateral.

It is clear that the problems before the Austro-Hungarian military authorities, in spite of the start that might be gained and the probable tactical superiority of the Austrian troops, will be no easy ones. The theatre of war is very extensive, and shows two eccentrically placed goals in the field of operations, Warsaw and Kieff, both lying far from each other. With the capture of Warsaw by the Austrians, Russia would certainly have lost Poland, but the huge Russia proper would not, however, be affected. To reach the heart of the country the

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road lies from Galicia through Kieff, over the strong line of the Dnieper. Although it is certainly the case that during the summer months the fertile provinces of Volhynia and Podolia are rich in supplies, it must always be remembered that Russia's best allies are its enormous extent and its climate, against which even a leader like Charles XII. of Sweden—even the iron will of Napoleon I.—came to shipwreck. If thus the strategical and tactical conditions appear at the outset favourable for Austria, so on the other hand it is not to be denied that Russia, if it carries on the war with tenacity to the bitter end, has these natural allies, which will exhaust her enemies, and limit effectually for them the attainable rewards of victory.

The 8-Centimetre (3½-inch) Field Gun, Model 5, with Dismountable Carriage.—Batteries forming part of an advance or flank guard often find themselves under the necessity of rapidly surmounting obstacles or of traversing narrow roads, the difficulties of which have not been sufficiently early taken into account. In order to obviate these difficulties, the ordinary carriage of the 8-cm. (3½-inch) Q.F. field gun (Model 5) has been so arranged that by means of the simplest tools the shields can easily be removed, and the axle and the upper part of the carriage separated from the lower. It can then be brought along a very narrow road or pass over a watercourse; a narrow-gauge axle can be fixed to the lower part of the mounting with wheels somewhat lower than the normal ones, and the gun and upper carriage (without the shields) re-mounted, or the different parts separate from the gun be transported by extemporised methods.

To each dismountable carriage are added a short axle of 75-cm. (29½-inch) gauge and a couple of wheels of 90-cm. (35½-inch) diameter. The height of the trunnions above the ground when the gun is mounted on these wheels is 80-m. (34½ inches). Each regiment of artillery will possess in the more or less distant future a battery fitted with dismountable carriages. At present there is one of these batteries in each of the artillery regiments of the 3rd, 4th, 7th, 11th, 12th, and 13th Corps.—*Militärische Presse (Artilleristischer Blatt)*.

Employment of Automobile Wagons for the Transport of Siege Mortars.

—The heavy artillery of the Austro-Hungarian field army, in conformity with its organisation, consists of 15-cm. (6-inch) howitzer batteries. The mobility of these batteries is very great. Along roads they can move forward at the trot. The projectile is a very effective shell with heavy bursting charge, and its high trajectory enables it to search out all kinds of cover, even of provisional fortifications. But for attack against permanent fortifications, bridge-heads, etc., the heavy artillery must be strengthened, and for this purpose the 24-cm. (9½-inch) mortars (Model 98) will be used. Some very successful trials for mechanically transporting these guns have recently been carried out. The automobile employed has been a 100-H.P. 6-cylinder Daimler, and it has shown itself able to draw with ease the gun and mounting on their respective trucks at the same time at a speed of 15 kilometres (9½ miles) an hour. A 4-mortar battery will thus require for its transport four similar automobiles, with the wagons necessary for transporting the equipment of the guns and the first supply of ammunition.

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The Daimler employed is so constructed that it can transport its load across country and over ascents and ridges; when the ground is very heavy, the automobile moves forward alone to the position fixed upon for the battery to occupy, anchors itself firmly, and then by means of a windlass and wire hawser drags the gun and mounting up to the position.

The mounting of the 24-cm. mortar is a so-called fore-pivoting cradle mounting (*Vorderpivot-Wiegenlafette*). The cradle, placed by means of a cradle-support (*Wiegenträgers*), in the lower part of the mounting, is allowed to move only vertically for elevation, whereas the platform to which the lower mounting is fixed can be trained round a fore pivot. The mortar has an elevation of 65°. It is made of nickel steel with an inner and outer tube, and the rifling consists of 56 right-handed grooves with increasing twist. The extreme range of the mortar is 5,800 metres (6,340 yards), and the weight of the projectile 133 kg. (293 lbs.). The 24-cm. mortar is the only Austrian siege gun using steel projectiles, and is made at the Skoda Gun Foundries at Pilzen. In its ballistic properties it differs but little from the 28-cm. Krupp field mortar which the Germans use.—*Militärische Presse (Artilleristischer Blatt)*.

Reorganisation of the Engineer Corps.—By a *Ukase* of the **Bulgaria**. 1st January, 1909, the organisation of the Engineer Corps has been modified in view of grouping the units which have to receive the same instruction.

There have been up to the present :—

1. Nine divisional battalions of Engineers stationed respectively in the districts of their infantry divisions. Each battalion included two companies of Pioneers and a technical company (telegraphists, light bridge-builders, etc.).
2. A pontoon battalion of two companies.
3. A railway regiment of two battalions (six companies).

For the future there will be :—

1. Three battalions of Engineers (each with six companies of Pioneers) garrisoned respectively at Sophia, Jambol, and Choumen.
2. A battalion of telegraphists (3 companies) at Sophia.
3. A pontoon battalion of five companies: two bridging companies at Biela and three light bridging companies stationed respectively at Biela, Nicopol, and Jambol.
4. A railway battalion of four companies (construction and working), and which includes in addition a balloon detachment and Engineer park.

This change on the whole shows an economy in the superior cadres. The new organisation came into force by an Order of 17th February, 1909.

Frontier Companies.—The companies which carry out the guard duty on the most important points of the frontier were, up to the end of

Bulgaria.

1908, detached from the nearest infantry regiments. The creation of sixteen frontier companies by a *Ukase* of 15th January, 1909, has the effect of adding an additional company to each of these regiments, which now consists of nine in place of eight companies.

The frontier companies will have the same strength as that voted for other infantry companies. Their commander will be under the direct orders of the colonel commanding the regiment.

Each frontier company will only be allotted to this duty for a year; at the end of this time it will be recalled and replaced by another company of the regiment. Half the personnel of the company will be changed at the end of six months' service on the frontier. No young soldier will be incorporated in this company.

These regulations bear witness to the care shown by the Bulgarian military authorities not to allow the training and military spirit to become impaired by special service out of the control of the regimental commanders.

Instructions for the General Inspections in Time of Peace.—The *Ukase* of the 9th January, 1907, first created the General Inspections; the Order No. 450 of the 28th November, 1908, of the Minister of War now settles and defines in a most precise manner the powers and duties of the inspector-generals.

The country is divided into three *inspections* as follows:—

1st, Territorial Inspection: the 1st, 5th, 7th Divisions; headquarters, Sofia.

2nd, Territorial Inspection: the 2nd, 3rd, 8th Divisions; headquarters, Philippopolis (Plovdiv).

3rd, Territorial Inspection: the 4th, 6th, 9th Divisions; headquarters, Roustchouk (Rouse).

The Inspector-General has under his command all the troops and military and naval establishments stationed in the district of his inspectorate, with certain restrictions in regard to the corps and establishments which are directly subordinate to the cavalry, artillery, and engineer inspectorates.

The Inspector-General directs the instruction of the officers and soldiers, prepares for mobilisation, studies possible operations, improvements which can be made in the fortifications, and draws up statistics relative to his district; he is to keep himself *au courant* with the organisation and preparation for war of neighbouring armies as well as with any changes which may be made in them.

The Staff of the Inspector-General is composed of a Chief of Staff of the rank of major, and of an orderly officer of the rank of captain, belonging to the General Staff.

Suppression of the Naval Section of the Ministry of War.—By a *Ukase* of 22nd January, 1909, the naval department of the Minister of War has been suppressed. Matters relating to the navy will be transacted by a lieutenant of the 1st Class, specially attached for naval affairs to the department of the Chancellerie of the Minister of War.

This change of organisation appears to correspond with a diminution of the view of the importance attached to the maintenance of the Bulgarian navy, of which the Danube flotilla has been reduced by the Budget of this year.

Bulgaria.

New Field and Mountain Guns.—The last of eighty-four Q.F. Schneider guns ordered for the Bulgarian Army in 1896, and nine batteries of Krupp mountain guns have been delivered. A second order, to be completed by the end of the year, includes nine 4-gun batteries of Creusot mountain guns, as well as nine 4-gun batteries of 4.2-inch howitzers, and thirty-four German machine guns, as well as 114 of Russian manufacture. In addition, ammunition for all these guns has been provided, as well as 200,000 tents, and large quantities of material for medical and engineer purposes.—*Revue Militaire des Armées Etrangères.*

The Aerial Fleets in France and Germany. — *La France*
France. *Militaire* calls attention to the fact that the value of an aerial

squadron is the theme of frequent discussion, and that this has been particularly the case in France; but that, as always is the case in France, after having been enthusiastic over work peculiarly congenial to her engineers, the general public seem to-day to have lost interest in the subject, and the merits of an invention, in the utilisation of which for military purposes we were first in the field, are now merely discussed casually.

"This is not the case in Germany," it continues, "where civil and military authorities and personages alike do not cease to proclaim their belief in the value of aerial squadrons. It cannot be denied but that good to our neighbours has resulted from this, and if in the future these war fleets should prove a success, as is our conviction, they will have gained an appreciable advantage over us, and one which will go on increasing."

People in France can form no idea of the popularity which the balloon question and of their employment in war enjoys in Germany. It is extremely rare to take up a journal from across the Rhine without finding an article of greater or shorter length devoted to aviation or aerostation. The German public is greedy for these details, and passionately devours them. In France, on the other hand, the Press contents itself with reproducing these articles; but scarcely any of the journals take the trouble to guide opinion in this matter, so that the French public know far more of what is being done in Germany in advancing this science of aviation than it does of what is being done in this country. Good work has nevertheless been done, but the almost isolated efforts made by the French War Department cannot be compared with the national demand in Germany for the creation of a powerful aerial fleet—a demand as popular as that for a large Navy.

However, thanks to the original start we had, we are not yet in a position of inferiority; but it is high time to wake up and set to work with increased ardour if we are not to see the foreigner reap the benefit of an invention originally discovered by ourselves.

Although Russia and Italy have already made great efforts and considerable sacrifices in order to construct or acquire military aerial units, and that England and Austria are following on the same road, it is incontestable that France and Germany have a very long lead. We purpose to show our readers what next autumn will be the relative position of the French and German fleets.

France

Germany comes first in the amount of money devoted by the great military Powers of Europe to aerial navigation; she is spending this year £130,731. France comes next with an expenditure of £47,000, and then, but very far behind, comes Austria-Hungary, Great Britain, Italy and Russia.

Thanks to this considerable expenditure, Germany will in the autumn of this year dispose of four dirigibles of the "Zeppelin" type, three of the "Gross" and three of the "Parseval" types; that is, ten utilizable units, each of these three types having proved that they can remain in the air for at least twelve hours. Of the "Zeppelins," No. 1 is on Lake Constance, where it will serve provisionally as a school ship; No. 2 at Metz, where it is to arrive almost immediately; No. 4 at Constance (is the old "Zeppelin" reconstructed); while No. 3, still completing at Friedrichshafen, is to be sent to Cologne.

The "Parsevals" are the most easy to transport; the facility with which they can be put together and inflated make them true field units. No. 1 is at the trial ground near Berlin; No. 2 is at Tegel, but is to leave for Metz; No. 3 is housed at Bitterfeld. The latter is larger than the two first, and it seems settled that the next "Parsevals" will be larger still, the last trials having been very satisfactory.

The "Gross" ships are held in very high esteem by the German General Staff. All their trials have been successful. No. 2 is at Metz and the other two are still at Berlin.

Some other types of dirigible are under construction or beginning their trials at Nonnendanun, near Berlin (dirigible "von Krogh"), at Danzig (dirigible "Schüller"), at Munich (the "Zimmer"), and at Hanover (the "Wuger"). None of these have yet been accepted or acquired by the military authorities.

France can put in line the "République," the "Lebaudy," the "Ville de Paris," and in a few months the "Liberté" and "Colonel-Renard." To these can be added the "Ville de Bordeaux," the "Clément-Bayard," and the "Ville de Nancy" (this last is not yet quite finished), which, although they belong to private owners, would in case of war be at the disposal of the Minister of War.

Eight against ten—the disproportion is not enormous, but it is mortifying after we have for so long kept the lead. One dirigible is allotted to each of the fortresses of Toul and Verdun, and shortly there will be one each at Epinal and Belfort. The Germans have decided to construct stations for dirigibles at Metz, Strasbourg, Cologne, and Mayence. These stations will be provided with all the necessary material for inflating, renewing supplies, and repairs, and even for construction, and a company and a half of balloonists will be attached to each.

Three dirigibles have been already allotted to Metz and Cologne; at Metz "Zeppelin No. 2" and "Gross No. 2," while at Cologne will be a dirigible of each type, probably the Nos. 3. The German fleet, it must be borne in mind, is the object of a constant training. Scarcely a month passes, except during the winter, when a "Zeppelin," "Gross," and "Parseval" are not making trials or voyages of considerable duration. These trials are constantly being renewed for several successive days, often in very rough weather, as those on the 26th, 27th, and 28th April of the "Gross II." at Berlin, or like the voyage of the "Zeppelin" at Munich, the

France.

5th and 6th April, after a journey of 700 kilometres (437 miles) on the 1st and 2nd of April. Thus in five days we have seen a German dirigible accomplishing three voyages of 12 hours. At their mean speed this gives a radius of action of 500 kilometres (312 miles).

Let us remember that in such a voyage a dirigible, starting from Metz, can in half a day turn between Meaux and Paris and regain its shelter. Starting from Cologne, it can reach Lille or the forts of the Meuse; from Mayence, the camp at Châlons; from Strasburg, Belfort or the Cathedral at Reims.

Such raids seem now to be perfectly possible with balloons starting from well-organised stations and manned by trained crews. And we see that Germany keeps her dirigibles constantly at work. It is not sufficient to have balloons, it is necessary that they should be utilisable at any time. We shall not discuss here the consequences that might result on the day of mobilisation from a reconnaissance of the eastern part of the country by the German aerial fleet. It is sufficient that we have shown that it is possible. We shall shortly indicate the measures taken to assure to this organisation the maximum of power and its normal development in accordance with the plan of the German General Staff.—*La France Militaire.*

Calling out of the Reservists and Men of the Landwehr in Germany.—For the 17 army corps of the Prussian contingent the men called out are distributed as follows:—

| | | |
|---------------------------|-----------|---------|
| 1 Infantry | - - - - - | 212,580 |
| 1 Chasseurs | - - - - - | 6,780 |
| 1 Machine Gun Detachments | - - - - - | 805 |
| 1 Field Artillery | - - - - - | 34,030 |
| 1 Foot Artillery | - - - - - | 18,500 |
| 1 Pioneers | - - - - - | 11,890 |
| 2 Railway Brigade | - - - - - | 2,803 |
| 3 Automobilists | - - - - - | 450 |
| 4 Balloonists | - - - - - | 315 |
| 5 Telegraphists | - - - - - | 1,225 |
| 6 Train | - - - - - | 9,602 |
| Total | - - - - - | 298,980 |

This total shows in comparison with 1908 an increase of 29,148, and the proportion ought to be two-thirds reservists and one-third *Landwehr*. This would make the number of the men of the *Landwehr* called out about 100,000.

¹ For 14 days.

² 2,047 reservists for 28 days and 756 men of the *Landwehr* for 14 days.

³ 450 reservists of other arms for 28 days.

⁴ 183 reservists for 21 and 28 days, and 132 men of the *Landwehr* for 14 days.

⁵ 880 reservists for 42 days, and 345 men of the *Landwehr* for 14 days.

⁶ 1,272 for 20 days and 8,330 for 14 days.

Germany.

The surplus (200,000) does not represent the number of reservists, because the figures above mentioned give simply the number of days that the commanders of army corps are not to exceed in their summons for service. The instructions specify that the prolongation of the period provided for in the different cases enumerated hereafter (third battalions of some small regiments, battalions raised to a strength of 700 men, 10 reservists per infantry company, pioneers, etc.) must be made up by a fewer summonses for service.

On the other hand, the figures of the table above mentioned do not include the reservists required to complete the complement for the Imperial Manœuvres (called out in sufficient numbers to bring the effective manœuvre strength up to the peace establishment, as laid down in the Budget), the men to complete the cavalry, six reservists per machine gun company in the army corps denoted below,¹ the old one-year Volunteers (8 weeks), the ministers of different religions requisitioned for the hospitals, the hospital attendants, nurses, bakers, and butchers, telegraphists, balloonists, etc.

Categories of Men to be Called Out.—The reservists called out for a first period belong to the two youngest classes of the reserve, and the men of the *Landwehr* to the youngest class of the *Landwehr* (1st Ban). For preference the men whose first period has not exceeded 14 days should be called out for a second period in the reserve. With the view of perfecting the war preparation of the lower grades, the non-commissioned officers and candidates for non-commissioned officers of the reserve intended to form part of training units or to take part in the manœuvres can be called out 8 to 14 days before the men, and be assembled in some garrisons or camps of instruction to receive a uniform training.

The instructions define in the same manner as previous years the object of the exercises, viz., the freshening up of what has been previously learnt, the tightening the bonds of discipline, and the perfecting of the training, *solely in view of war*.

Distribution of Men Called Out.—The men are incorporated in the units on peace footing or grouped in special units constituted as much as possible in the camps of instruction (regiments of infantry and groups of artillery of the reserve, infantry *Landwehr* units, special training companies of the train).

In all the infantry regiments with two battalions there will be formed for the manœuvres a third battalion out of the reservists called out for 28 days.

In the Guards Corps, the corps numbered I. to VI., VIII. to XI., and XIV. to XVIII., there will be formed a regiment of infantry of the reserve; in the VII. there will be formed two, that is, a total of 18 regiments in place of 17 in 1908 and 12 in 1907.

A group of artillery from the field artillery reserve will be formed in each of the army corps mentioned above, that is, a total of 17 in place of the 15 in 1908.

There will also be constituted this year some reserve regiments and of the *Landwehr* foot artillery from the men called out for 28 days.

¹ For four weeks, 1 company in the 2nd and 10th Corps; 2 companies in the Guard, the 3rd, 4th, 8th, and 14th Corps; 3 companies in the 7th Corps.

Germany.

The infantry chasseurs and pioneer battalions of the XIV. Corps will be raised for the manœuvres to a strength of 700 men by the incorporations of reservists called out for 28 days.

As in preceding years, each company will receive for the manœuvres 10 reservists called out for 28 days, and each company of chasseurs 15.

In the cavalry regiments, even if they do not take part in the Imperial Manœuvres, as many reservists as can be mounted will be incorporated.

In the field artillery (except in the regiment attached to the School of Firing), after the autumn manœuvres, a certain number of cavalry reservists will be called up for 14 days for training as drivers (from 5 to 11 per battery, according as the effective is weak, up to the average, or strong).

Each army corps will put at the disposal of the general inspection of foot artillery 90 reservist non-commissioned officers and drivers of the train (at the *maximum*) belonging to the youngest classes. All the reservists of the pioneers are called out for 28 days.

The fortress telegraphists (551, including Saxons) are called out in three detachments of 42 days each in the various fortresses of the Empire and the military telegraph headquarters at Berlin.

The men of the artisan sections (887) are called out, the reservists for 28 days, the men belonging to the *Landwehr* for 14 days, to carry out work in the different camps of instruction.

The hospital attendants, nurses, and *Ersatz*-reservists are called out under the old conditions.

The detailed regulations relative to the calling out of officers and the organisation of the training units are also reproduced with scarcely any modifications.

The instructions insist strongly on the necessity of making the officers perform during the time they are called out the same duties that they would have on mobilisation.

Ammunition for Exercise.—Cartridges are allotted in conformity with the regulations for practice ammunition.

In the field artillery there is allowed for every 100 men called out (excluding those coming from the cavalry) who can take part in the firing battery school, forty shells 96, and sixty shrapnel 96, as in 1908.

In one battery of each army corps these munitions can be replaced by forty practice shells 98, and sixty shrapnels 98 for light howitzers.

There are allotted for each battery of a group of reserve field artillery 300 shrapnels 96, 75 shells 96, and 100 rounds of blank (in place of 300 in 1908).

Bavarian Army.—Pretty much the same regulations are applicable to the contingents of the Bavarian Army.

The number of men to be called out in Bavaria has risen to 42,473, divided as follows: Infantry, 29,700; chasseurs, 950; machine gun detachment, 50; field artillery, 3,540; foot artillery, 4,500; pioneers, 1,640; railway battalion, 333; automobilists, 24; balloonists, 69; telegraph detachment, 162; train, 1,505.

If the Saxon and Würtemburg contingents are counted as about equal to the Bavarian contingent, we find a total for the whole German Army of 383,000 men called out in 1909.—*Revue Militaire des Armées Etrangères.*

Germany.

Flight of the "Zeppelin I."—Recent Performances of the Famous German Air-ship.—As may be known to our readers, the German Government has put its new airship in the hands of the aeronautic battalion for further tests. Unfavourable weather delayed the filling of the balloon until 6th March. The first ascent was to take place on 8th March, but the motors were not in order, and could not be made to operate satisfactorily until the evening of that day.

Consequently, the first ascent of the airship took place on the morning of 9th March, lasting from 9.15 a.m. till 10 a.m., and serving as a drill for the members of the staff. The second ascent took place at 11 a.m. lasting until 12.30 p.m. At the third ascent the airship rose from the ground without assistance, and covered a distance of 150 to 200 kilometres (93 to 124 miles), the voyage lasting for about 2½ hours, the estimated speed being about 1.3 metres per second (28½ miles per hour) even with a contrary wind.

By a fortunate coincidence, a meteorological station is situated on Lake Constance. Thus atmospheric conditions are tested by means of kites before each ascension, and unpleasant surprises are obviated.

Accordingly, on 10th March an ascent was undertaken at 11.15 a.m., after the determination of the conditions of the atmosphere. The younger Count Zeppelin was in the car; but the elder Count Zeppelin did not ascend, though he had consented to accompany Major Sperling, Captain Jena, and the younger Count the previous day on the first military ascent. The descent was made very smoothly about 1 p.m. In the afternoon, when the brisk wind which rose about noon had died down, the balloon was drawn out of the shed about 4.30 p.m., and remained out about threequarters of an hour.

As the fine weather continued, another ascent was undertaken at 9.30 a.m. on 11th March.

On this trip special observations were made from above the land in the neighbourhood of the new balloon shed of the Zeppelin Airship Construction Company, with the object in view of attempting within a few days a descent upon *terra firma*. At three o'clock in the afternoon the airship again rose, coming down about 5.20 p.m. upon the surface of the water.

The flight on the 12th of March was the highest thus far attained with any airship of rigid construction, the balloon rising very rapidly to a height of some 900 metres, and afterwards ascending still higher.

The greatest height reached was estimated from 1,500 to 1,800 metres (4,921 to 5,905 feet).

This flight had for its special object the testing of the horizontal rudders. Count Zeppelin himself took part in this test, the other participants being all military—the four officers and the mechanics of the Berlin Aeronautic Battalion.

On the 15th of March an event occurred which may prove to be of much significance in the further development of airships of rigid construction. The "Zeppelin I" rose shortly after 8 a.m., crossed over the city, and then descended on the place previously determined by the Airship Construction Company. The descent was accomplished by making use of the horizontal rudders till the balloon was 25 to 30 metres (82 to 98 feet) above ground, when it was drawn down to earth by ropes in the hands of the men of the Aeronautic Division.

Germany.

Photographs show these manœuvres very clearly, and also display the extreme ease and comfort with which communication is established between the car and the ground.

Part of the steering gear sustained a trifling injury by being dragged past a tree.

This first successfully planned and accomplished landing of an airship of the rigid type on *terra firma* took place in the presence of the Inspector of Troops, Lieut.-General von Lyncker, and Major Gross, Commander of Aeronautic Battalions. Encouraged by this success, a similar landing was undertaken on 18th March, and likewise accomplished smoothly and successfully.

In both cases the airship returned to the shed.

As soon as the "Zeppelin I." demonstrated that a descent upon solid earth could be made without difficulty, an extended voyage was planned, and on 1st April a journey to Munich was attempted.

The airship started from Friedrichshafen at 4.05 a.m., while it was still dark and cloudy. The start was made against a strong north-east wind. The huge air craft rose to a height of about 1,000 feet, and was headed for Munich, 111 miles away. The principal intervening cities were brilliantly lighted, so as to show aerial navigators the course to be followed. Munich was reached shortly before 9 o'clock, and the airship's approach was signalled by the ringing of church bells and the firing of cannon. After reaching the exposition grounds the airship descended to within about 300 feet of the earth. A great crowd assembled, and the Prince Regent saluted Count Zeppelin as he stood in the car of his airship. The wind had increased in intensity, and the Count was afraid to attempt a landing. The airship again soared aloft, and soon it was being driven before the wind. It was impossible to hold the huge air vessel against the gale, which soon attained a velocity of nearly 40 miles an hour. Consequently, since it had a speed of but 26 miles an hour, it drifted at the rate of 14 miles an hour, and in five hours' time reached Dingolfing, 70 miles from Munich. Here the Count attempted to land, and he was successful in accomplishing this dangerous manœuvre. The airship was moored over night without damage, and at 11.15 the next morning it reascended in a moderate wind, and returned to Munich in 24 hours. Another successful landing was made on the parade grounds on the outskirts of the city, and Count Zeppelin was decorated with a gold medal by the Prince Regent of Bavaria. At 3.30 p.m. the airship again reascended and started for Friedrichshafen, which place was reached at 8 p.m. at a speed of about 24·6 miles an hour.

On 5th April the airship started at 9.18 a.m. on a 24-hour endurance trip; but owing to unfavourable weather conditions, this was abandoned, and the airship returned to its shed at 7.25 p.m. During the nine hours that it had been in the air, it descended twice to the surface of Lake Constance to take in water ballast. The airship travelled to Biverach, and then returned to the lake, where it spent most of the time in executing various manœuvres. A strong easterly wind rose early in the evening, and as it was impossible to make much headway against this wind, the airship was returned to its floating shed. The following day a short flight was made across the lake to Constance, and the airship landed successfully on the parade ground near the city. On 7th April the airship made a

Germany.

12-hour flight, going first to Wanger in Würtemburg, and then returning to Friedrichshafen by another route. The trip was entirely successful.

These flights are the first that have been made by the officers of the German Army. In some of them as many as twenty-six men were carried upon the airship. This vessel is the remodelled "Zeppelin III." which has been renamed "Zeppelin I.," since it is the first Zeppelin airship to be taken over by the German Government. Another new airship—the "Zeppelin II."—is almost completed. It is the purpose of the German Government to have one such airship at each important fort on the German frontiers. The management of the Frankfort Aero-nautical Exposition, which is to be held from June to October, have also contracted for one of these airships for exhibition purposes.

The demonstration which was given during the trip to Munich on 1st April shows that the rigid type of airship is entirely practical, even under the most severe weather conditions. The fact that it was able to land on the ground without sustaining any serious damage shows that such a vessel can be used for transporting people, and landing them safely in case of accident.—*Scientific American.*

Russia. *Changes in the Status of the Russian General Staff (Army Order No. 506/1908).*—Army Order No. 506, published on the

24th November, 1908, introduces important changes in the status of the General Staff, and ordains that from this date (1) the Chief of the General Staff is directly subordinated to the War Minister, and (2) all reports emanating from the War Minister on matters concerning the administration of the General Staff are to be made personally to the Emperor by the Chief of the General Staff in the presence of the War Minister.

Previous to 1905 the General Staff was completely subordinate to the War Minister, who reported personally to the Emperor even on matters affecting the General Staff.

By Army Order No. 424, of 1905, the General Staff was separated from the Ministry of War, and was formed into a special and independent department, the Chief of the General Staff having the right to report personally to the Emperor on all matters affecting it. This system of dual control proved, however, unsatisfactory. Important questions affecting the General Staff were often found to be so closely connected with the Ministry of War that a preliminary conference was frequently required between the Chief of the General Staff and the War Minister before reporting to the Emperor. The result was considerable friction between the two departments.

The recently published Army Order No. 506/1908, re-establishes unity of control without, however, abolishing the specialization of the work of the General Staff.

Portable Field-kitchens in the Russian Army (Communicated).—In the *Intendantski Jurnal*, No. 9, of September, 1908, extracts are given from the proceedings of recent meetings of the Technical Committee of the Chief Intendance Department, from which it appears that the question of the most suitable type of portable field-kitchens is about to be solved by

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the introduction in the Russian Army of a new 1908 model cooking cart of Government make and pattern.

The compiler of the extracts states that in 1905 the Committee decided to make exhaustive trials of a number of the various patterns of portable kitchens then existing.

The patterns selected for trial were those of Brun, Colonel Bogaevski, Lieut.-Colonel Mikini, the Government Carriage Factory, Lieut.-Colonel Dobronravov, and Lieut.-Colonel Grjimailo. The last named is for pack transport only.

Samples of each of the above-mentioned patterns were issued to certain selected units for trial and report.

A summary of the reports was laid before the Committee early in the present year, and the results of the experiments are given below :—

TABLE OF DATA OF THE PATTERNS SELECTED FOR TRIAL.

| Details of cooking-cart | Brun. | Carriage Factory. | Mikini. | Bogaevski. | Dobronravov. | Grum-Grjimailo (pack). |
|---|--------------------------------|--------------------------------|-------------------|--------------------------------|---|------------------------------|
| Total weight loaded and filled (with fuel, etc.)... | 13·82 cwt. to 16·71 cwt. | 14·14 cwt. to 16·30 cwt. | about 17 cwt. | about 16 cwt. | about 12 cwt. | ? |
| Total weight empty (without fuel, etc.) | 8·68 cwt. | 8·51 cwt. | 7·71 cwt. | 8·35 cwt. | 8·03 cwt. | 300 lbs. |
| Capacity of boiler ... | 62·64 galls. | 64·8 galls. | 62·1 galls. | 75·6 galls. | (soup, etc.) 32·4 galls. (water) 10·8 galls. | Sufficient for 40 to 60 men. |
| Time required for boiling | hr. mins. 1 40 | hr. mins. 1 30 | hr. mins. 1 30 | 2 to 3 hrs. | 2½ to 3 hrs. | ? |
| Maximum expenditure of fuel (approx.) ... | 72 lbs. | 80 lbs. | 72 lbs. | 80 lbs. | ? | ? |
| Height of top from ground | 4 ft. 4 in. | 4 ft. | 4 ft. 10 ins. | 4 ft. 4 in. to 4 ft. 6 ins. | 5 ft. 2 ins. | ? |
| Distance of lowest part from ground | 25 ins. | 18 ins. | 28 ins. | 22 ins. | 20 ins. | |

Of the above systems, that of Lieut.-Colonel Dobronravov is the only one which admits of the simultaneous preparation of soup, gruel, and boiling water for tea.

The defects of the various systems were found after trial to be as follows :—

1. *Brun System.*—Insufficient accommodation for fuel, and no separate place for carrying forage.

The chimney is too high, and the carriage requires a brake.

2. *Carriage Factory System.*—The fire-place is too close to the ground, and the carriage is therefore unsuitable for heavy or rough roads. The lid of the boiler has too many chambers, and is therefore difficult to keep clean. The boiler is not absolutely hermetically closed, and the method of filling it is inconvenient.

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3. *Mikini System.*—The chimney is insecure. The lid of the boiler, being of iron, is liable to rust. The fire-place is perishable by the action of fire, and the food is apt to be burnt. The boiler is too high to admit of the food being easily served.

4. *Bogaevski System.*—The chimney is set too far back, and thus interferes with the work of the cooks. The chimney is also insecure, and is liable to be jolted out of its socket on rough ground. The wooden boxes are apt to swell and warp. The springs of the carriage are too weak, and cause excessive oscillation. This last defect is common to all the systems, except that of Brun, which has no springs. Owing to the position of the discharge-taps, which are on the side instead of being at the bottom, the boiler is difficult to clean.

5. *Dobrovavov System.*—The defects are much the same as in the Bogaevski system.

The small capacity of the boilers admits of only 120 men being provided for at one meal; but, on the other hand, the possibility of preparing soup, gruel, and boiling water simultaneously is a great advantage.

6. *Grum-Grjimailo System.*—Even without fuel, forage, etc., it constitutes a heavy load for a pack animal, and, owing to its excessive width when packed (5 feet 3 inches) it cannot easily be transported along narrow mountain paths. Few horses, however, well trained, can stand the noise of the steam from the boiler, and accidents are liable to occur from hot water dripping on the animal's back whenever the lid is opened. It is difficult to serve the food without removing the apparatus from the horse's back.

After carefully considering the reports, the Chief Intendance Department has decided to order 637 field-kitchens forthwith. Of these, 300 will be supplied by two or three of the above-mentioned makers, who have undertaken to remedy the defects as far as possible. The remaining 337 will be constructed in Government factories on a specially devised principle which will be worked out from the data collected by Lieut.-Colonel Mikini during his recent visit to various European countries.

The Committee is of opinion that the best type of field-kitchen is one which admits of the simultaneous preparation of soup, gruel, and hot water, without thereby adding to the weight of the apparatus or increasing the number of vehicles. The division of the company cooking-cart into half-company cooking-carts is considered undesirable.

In view, however, of the great, and almost insuperable, difficulty of constructing a field-kitchen possessing all these requirements, the Committee will be satisfied with one which will be capable of cooking soup and at the same time of boiling water for tea, the latter being considered more important in a campaign than gruel.

The duty of devising the pattern of the new field-kitchen has been entrusted to Lieut.-Colonel Mikini, who is appointed a permanent member of the Technical Committee.

In this way the Committee hopes shortly to have a completely satisfactory 1908 model field-kitchen of Government design and make for general use in the Russian Army.

NAVAL AND MILITARY CALENDAR.

MAY, 1909.

- 4th (T.) H.M.S. *Forte* left Portsmouth for Cape of Good Hope station.
10th (M.) Mohammed V. invested in Constantinople with the sword of Othman.
11th (T.) H.M.S. *Scylla* arrived at Sheerness from the North American and West Indies station.
" " News received of British force ambushed in Nigeria. Lieutenant Vanrenen, in command, three Europeans and thirty-five native police killed.
12th (W.) Bi-centenary of War Office Circular by General Peel authorising the formation of the late Volunteer Force.
15th (Sat.) H.M.S. *Temeraire* commissioned at Devonport.
17th (M.) H.M.S. *Scylla* paid off at Chatham.
" " 400th Anniversary of the foundation of the Hon. Corps of Gentlemen at arms by Henry VIIIth. Inspection of the Corps by the King at Buckingham Palace.
18th (T.) H.M.S. *Scylla* recommissioned at Chatham.
" " General Stössel, and Rear-Admiral Nebogatoff released from Fortress of St. Peter and St. Paul by order of the Tsar.
25th (T.) H.M.S. *Exmouth* arrived at Portsmouth from the Mediterranean.
29th (Sat.) H.M.S. *Superb* commissioned at Portsmouth.
" " German Dirigible Zeppelin II. ascended from Lake Constance for long trial trip.
31st (M.) H.M.S. *Exmouth* paid off at Portsmouth.
" " Zeppelin II. descended at Goppingen after nearly 36 hours journey of over 900 miles.

FOREIGN PERIODICALS

NAVAL

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NOTICES OF BOOKS

The Russian Army and the Japanese War. By General KUROPATKIN. Translated by Captain A. B. LINDSAY. Edited by Major E. D. SWINTON, D.S.O. London, John Murray, 1909.

When a defeated general explains at length to his countrymen the causes of a national disaster, and when his explanation takes, in great part, the form of a repudiation of responsibility, the reader inevitably embarks on his task of study with some feeling of distaste.

In the case of the abridged translation of General Kuropatkin's “The Russian Army and the Japanese War,” which Mr. Murray has recently

published, this note of self-defence is very strong. The General repudiates responsibility for the policy of rapid expansion which brought Russia into premature conflict with Japan; moreover, he finds serious fault with the fighting qualities of many of his troops—a line of defence calculated to lose him the sympathy of most English readers. And while not sparing criticism of certain errors of judgment of which he at times accuses himself, he is infinitely more severe in his denunciations of the majority of the general officers who served under him in Manchuria.

Yet, with all these distasteful features, General Kuropatkin's book is one of extraordinary interest to the student of war, and when considered as a whole, the reader finds that the denunciations of his subordinate commanders, and even of the rank and file, proceed rather from a primitive simplicity of character and a bluntness of expression, than from any want of generosity.

Englishmen during the progress of the Russo-Japanese War held General Kuropatkin in much esteem. They knew that his long career had been one of high distinction, that he had served his country in many campaigns, and that his abilities were held to be as undeniable as the courage and energy of which he had given so many proofs. His personal character also was unblemished. English soldiers knew, too, something of the difficulties with which Kuropatkin had to contend, and could sympathise with a commander compelled by national policy and national shortcomings to enter all unprepared on an arduous war. That situation, so common in our own history, ensures a ready hearing to General Kuropatkin, and an impartial consideration of the explanation adduced by him of the startling collapse of Russia in the Manchurian campaign.

The principal causes of failure, which are detailed more than once in the volumes under review, and apparently even oftener in the original work, are grouped by General Kuropatkin under three headings. In the first group we find the results of the defective national preparation for war and of the national circumstances of the period.

The sections of this group are:—

- a. The absence of previous diplomatic arrangements such as those which enabled the Germans in 1870 to employ without delay their entire forces against France.
- b. The faulty use of the fleet throughout the war.
- c. The inferiority of the railway communications.
- d. The internal disorders in Russia, which affected the spirit of the army.

For the first three of these defects, it may be noted, General Kuropatkin appears liable to at least some share of the blame, while as regards the fourth, he shows that the better spirit which animated his army at the end of the war was due partly to himself and partly to some of the very measures of which he elsewhere complains.

The second group comprises:—

- a. The delay in mobilising the reinforcements.
- b. The transfer to the reserve during the war of efficient soldiers who were still liable for colour service, while untrained elderly reservists were being sent to the front.

- c. Delay in sending drafts to the front.
- d. Delay in promoting those who distinguished themselves in the field.
- e. Deficiencies in technical equipment.
- f. Defects of organisation.
- g. Deficiencies of personnel of officers and men.

For all the defects in this second group, General Kuropatkin holds himself free from responsibility, and in this contention he seems to stand on firm ground.

The third and last group deals with the bad qualities of some of the troops, the defects of organisation in the field, and errors of generalship. As the general tacitly accepts a share of the blame for the defects in this group, they need not be detailed.

It cannot be denied that this long catalogue of errors and difficulties has a permanent value to other nations as well as to Russia; indeed, the applicability of many of General Kuropatkin's strictures to our own methods doubtless supplies Mr. Murray's motive for the publication of this book. Equally interesting, though perhaps of less practical value, are the General's vain regrets for what he declares to have been the premature and unnecessary treaty of peace which ended the war. When dealing with this subject, he gives striking figures. The army in the field, it is stated, was a million strong when peace was concluded, and more than two-thirds of this number had not been under fire—a doubtful advantage, from our point of view. Moreover, owing to improved rail transport and the proper use of local resources, this great host was better supplied than at any previous time, and all deficiencies of artillery and of technical stores had been made good. Russia's resources, too, were unimpaired, for the greater part of the army was still at home, while Japan had been reduced to placing old men and young boys in the field. General Kuropatkin asserts also that in spite of a long series of reverses the moral of the army was steadily improving, and this, he says, was the belief of the officers who were most in touch with the men. Perhaps the explanation lies, as the General suggests, in the fact that the Russian soldier, and, it might be added, the Russian nation, possesses latent moral strength of the kind which is developed slowly, and is not destroyed by any trials to which the individual is subjected.

This theory finds expression in the Order to the army and fleet issued by the Emperor of Russia on 14th January, 1905: "Though we may be sore at heart on account of the disasters and losses that have befallen us, do not let us be discouraged. By them Russia's strength is renewed and her power increased."

Enough has perhaps been written to call attention to the chief points of interest in this remarkable book. It is true that it tells its story from one side only, but it is well to study war from the point of view of the defeated as well as from that of the victors.

It may be added that Captain Lindsay, who has an established reputation as translator, has done his work smoothly and well, while Major Swinton appears to have carried out the task of compression with adequate discretion. The book is, for the reasons already given, emphatically one which Englishmen should read.

PRINCIPAL ADDITIONS TO LIBRARY FOR MAY, 1909.

The Jena Campaign, 1806. By Colonel F. N. MAUDE. Crown 8vo. 5s. (Presented.) (Swan Sonnenschein & Co., Ltd.) London, 1909.

Fifty Years of it—The Experiences and Struggles of a Volunteer of 1859. By Colonel the Right Hon. J. H. A. MACDONALD. 8vo. (Presented.) (William Blackwood & Sons.) London, 1909.

Froeschwiller, 1^{er} Juin—6 Aout, 1870. By ALFRED DUQUET. Crown 8vo. 2s. 6d. (Bibliothèque-Charpentier.) Paris, 1909.

A Short History of the Royal Navy, 1217-1815. Vol. II. By DAVID HANNAY. 8vo. 7s. 6d. (Presented.) (Methuen & Co.) London, 1909.

Field Service Regulations, 1909. Parts 1 and 2. 12mo. 2s. London, 1909.

List of War Office Records Preserved in the Public Record Office. Vol. I. Fcap fol. 8s. 6d. (Alex Thom & Co., Ltd.) London, 1908.

Sir Redvers Buller. By Captain LEWIS BUTLER. 8vo. (Presented.) (Smith Elder & Co.) London, 1909.

The Conduct of Modern Over-Sea Expeditions. By Commander WILFRED HENDERSON, R.N. 1909.

Memoir of the Life and Services of Vice-Admiral Sir Jahleel Brenton, Bart., K.C.B. By the Rev. H. RAIKES. 8vo. (Hatchard & Son.) London, 1846.

Some Reminiscences of Three-quarters of a Century in India. By E. J. CHURCHER. Crown 8vo. 2s. 6d. (Presented.) (Luzac & Co.) London, 1909.

Exerzier-Reglement fur die Kavallerie. 12mo. 2s. Berlin, 1909.

Le bilan de notre Marine. By J. L. DE LAUSSAN. Crown 8vo. 2s. 8d. (Felix Alcan.) Paris, 1909.

Lessons from two Recent Wars (The Russo-Turkish and South African Wars.) By Général H. LANGLOIS. Translated for the General Staff, War Office, from the French. Crown 8vo. (Presented.) (Harrison & Sons.) London, 1909.

With the 72nd Highlanders in the Soudan Campaign of 1898. By Colonel G. G. A. EGERTON. Crown 8vo. (Presented.) (Eden Fisher & Co., Ltd.) London, 1909.

The Colonies and Imperial Defence. By P. A. SILBURN. 8vo. 6s. (Presented.) (Longmans, Green & Co.) London, 1909.

Handbook of the Servian Army. Prepared by the General Staff. 12mo. (Presented.) (Mackie & Co., Ltd.) London, 1909.

The Theory of the Recoil of Guns with Recoil Cylinders. By Prof. F. RAVENBERGER. Translated by A. Slater. 8vo. (Presented.) (Crosby, Lockwood & Son.) London, 1909.

The Story of the Household Cavalry. By Sir GEORGE ARTHUR. 2 vols. Royal 8vo. £3 13s. 6d. (Archibald Constable & Co., Ltd.) London, 1909.

Records of the Scottish Volunteer Force, 1859—1908. By Major-General J. M. GRIERSON. Royal 8vo. 25s. (William Blackwood & Sons.) Edinburgh, 1909.

The Life of Major-General Sir John Ardagh. By SUSAN, Countess of MALMESBURY. 8vo. 15s. (John Murray.) London, 1909.

The Making of Canada. By A. G. BRADLEY. 8vo. 12s. 6d. (Archibald Constable & Co., Ltd.) London, 1908.

General Sir William Howe's Orderly Book at Charlestown, Boston and Halifax, June 17, 1775, to May 26, 1776. By General Sir W. HOWE. 8vo. 12s. (Benjamin Franklin Stevens.) London, 1890.

Publicaciones del Congreso Histórico Internacional de la Guerra de la Independencia y su Epoca (1807-1815). Tomo I. Crown 8vo. (Presented.) (E. Casañal.) Saragossa, 1909.

The Life of Sir Charles William Wilson. By Colonel Sir C. M. WATSON. 8vo. 15s. (Presented.) (John Murray.) London, 1909.

RECENT PUBLICATIONS OF MILITARY INTEREST.

COMPILED BY THE GENERAL STAFF, WAR OFFICE.

APRIL, 1909. PUBLISHED QUARTERLY.

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Continued from May JOURNAL, p. 700.

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PREFATORY NOTE.

This Pamphlet will be issued quarterly, in April, July, October and January. Its purpose is to draw the attention of Officers to British and Foreign publications of Military interest which are likely to assist them in their professional work. Copies of the pamphlet will be distributed to the Headquarters of Commands, Educational Establishments, Units and Reference Libraries.

PART II. SECTION I. BOOKS (continued).

*Note.—1. When the price is not given in Part II., Section I., it is not known.
2. In Part II., Section I., books whose titles are given in foreign languages as well as in English, are published in those languages, and are not translated.*

ARTILLERY.

Field Artillery (Artillerie de Campagne). By Lieut.-Col. J. Palouque. 422 pp. 8vo. Paris, 1909. Odin. 4/4.

This book forms part of a "Scientific Encyclopedia," which is being published under the direction of the well-known scientist, Dr. Toulouse. The author is a professor at the French Staff College, and although he treats the subject of Artillery principally from a scientific point of view, there is much in the book which is of a purely military nature. In the first chapter a kind of history of Artillery is given from the 14th century up to the present day, together with a description of the various guns, fuzes, shell and explosives which have been used at different periods. The second chapter deals with the conditions which modern Artillery should fulfil and also treats of projectiles, fuses, rapidity of fire, laying and personnel of the gun, and concludes with some notes regarding guns for horse artillery, heavy field guns,

mountain guns and pom-poms. Chapter III. is an introduction to the theoretical and experimental study of Artillery fire, and contains, among other features, discussions regarding dispersion of fire, and the question of the probable errors in laying. In Chapter IV. are discussed the effects of the various kinds of Artillery fire, whilst Chapter V. deals with a number of questions connected with Artillery organisation, such as how many guns an Army Corps should have, whether Artillery should be told off for the special purpose of accompanying Infantry in action, whether batteries should have four or six guns, etc. Chapter VI. treats generally of the conduct of Artillery in action, whilst the last few pages are devoted to a short description of the nature of the Artillery in possession of the various nations.

Reorganization of the Artillery (La Réorganisation de l'Artillerie). By Joseph Reinach, Député. Rapporteur de la Commission de l'Armée. 304 pp. Svo. Paris, 1908. Lavauzelle. 2/-.

This is the report in book form of a committee of the French Chamber of Deputies to which was referred the question of the re-organisation and increase of the French Artillery. The fact that France no longer possesses a field gun markedly superior to that of the German Army has rendered it a matter of urgency that an increase in the number of field guns and in the strength of the personnel of the Field Artillery of the French Army should be made.

The Committee examined the government proposals for the re-organisation of the artillery and any other suggestions brought before it, carefully considered the results of the experiments which took place in 1908, with a view to deciding on the respective values and advantages of 4, 6, and 8-gun batteries, and then drew up this report with its views embodied in the form of a new Bill for the reorganisation of the Artillery.

This Bill has been passed by the Chamber of Deputies, and it only remains for the Senate to approve of it.

A Short Survey of Practice and Experiments carried out by the Artillery in 1907 (Beknopt Overzicht der Proeven en Oefningen die in het Jaar 1907 bij het wapen der Artillerie hebben plaats gehad). Official. 126 pp. Svo. Breda, 1908. Kon. Mil. Academie. 2/6.

This is a report, in a condensed form, of the work done by the artillery of the Netherlands Army during the year 1907. It also contains reports of experiments carried out by the pontoon corps, and the corps of submarine miners. Among the experiments were included towing pontoons with motor boats; firing at balloons; trials of a shield for battery commanders and of asbestos gloves for the men handling the brass cartridges of quick-firing guns. Experiments were also carried out with a new gunpowder which was alleged to cause no flash from the muzzle of the gun on firing. The results of the trials are given. Some time fuses for the 12-cm. howitzer were also under experiment.

Shrapnel with Elongated Bullets (Zur Frage des Schrapnells mit Langgeschoszfüllung). By Major-General R. Wille. 19 pp., with 2 diagrams. Svo. Berlin, 1909. Eisenschmidt. 9d.

This pamphlet is written as a reply to General Bahn's criticism of a shrapnel, invented by the author, filled with elongated bullets.

General Bahn's criticisms have been chiefly directed against the device by which rotation is imparted to the bullets on the bursting of the shell. The centrifugal motion of the bullets is, he contends, sufficient to give them the necessary rotation. This theory General Wille now endeavours to disprove. He maintains that his shrapnel is sound in principle, though it still requires perfecting in various details.

The theory of laying with the sighting apparatus in use with modern land-service artillery (Das Wesen der modernen Visierzvorrichtungen der Landartillerie). By Ritter von Eberhard. 52 pp., with 5 plates. Berlin, 1908. Bath. 2/6.

This book is a scientific treatise on the theory of laying with the various patterns of sights in use with modern land-service ordnance. The author states in the preface that his method of handling the problems of spherical trigonometry involved is founded on the teaching of Professor Rausenberger. It is a book which should be of interest to mathematicians.

STRATEGICAL AND TACTICAL.

Modern War (Der Krieg in der Gegenwart). Unsigned article from the *Deutsche Revue*. January, 1909.

This article, popularly attributed to Field-Marshal Count Schlieffen, created some sensation owing to the German Emperor's reference to it in his New Year's speech.

A translation of the article appears in the February number of the *National Review*, and is divided into two portions: the first tactical, the second political.

The following is a summary of the first portion.

The Peace of Frankfort put an end to the struggle between Germany and France in appearance only.

One of the two opponents invented improved weapons, but could be sure that the other would before long discover still more perfect ones. The only endeavour has been to obtain, for the impending war of revenge, some advantage over the outwitted enemy by means of a superior weapon. In the course of years there have been moments when one of the two opponents thought to have attained his object, when it only remained to him to utilize the favourable moment. There were, however, other considerations, and owing to hesitation the enemy was allowed to make good the lost ground. The other Powers have not been able to remain indifferent spectators of this competition, but it has been enough for them to profit by the experience and outlay of the others. Not only in Europe, but also in the Far East and West the Franco-German quarrel has resulted in most armies being equipped with arms of great efficiency and of almost equal value.

The author describes the murderous effect of modern firearms, and points to losses of 68 per cent. in France and 90 per cent. in Manchuria. The technique of arms has had great triumphs, but the object of all the Powers, namely, a diminution of the difficulties of war and superiority over the enemy, has not been attained—on the contrary greater difficulties and more serious drawbacks have been produced. It is easy enough to say how the foe is to be swept down, but how to escape annihilation oneself is not easy to determine. A complete change has become necessary in tactics, for those of Frederick and Napoleon would lead to the troops being swept off the face of the earth. It is not even possible to overpower the enemy by dense lines of skirmishers. It is only by the use of the cover afforded by trees, walls, houses and ditches, by elevations and depressions, that the infantry soldier can get near his foe. Lying, kneeling, and standing alternately he must, without exposing himself, endeavour to hit the small target presented; he must beat down the hostile fire with his own, then quickly take some new cover and commence the struggle anew. But whatever cover the terrain may offer, sooner or later he will be separated from the enemy by an open space; if this be narrow the assailant may dash across it, but if it be broad he must seek cover with the help of his spade and advance from one line of trenches to another, and, if necessary, by night.

It is the business of the artillery to help the advance of the infantry and to destroy the enemy and his cover, and as it is not so easy to hide guns as men, an attempt has been made to protect the former with shields.

In order to get sufficient cover to fire in security and to advance rapidly, the infantry soldier requires elbow-room, and he can only fight effectively in thin lines with not more than one man to the metre. Other lines follow at some distance and draw together when cover permits of it. They are needed to replace losses and to meet unforeseen occurrences. It is only for the final attack that the reserves which have followed steadily in rear come up to the thin front line. Thus a direct result of the improvement in firearms is a great extension of fronts. Up to 40 years ago 10 men per pace was considered normal, while in the war in East Asia in 1904-5 it was usual to allot three men per metre or even less at a pinch. Neither of the opponents had any preconceived theory—these extended fronts were brought about by force of circumstances and there is little doubt that the same thing would occur in a European war. Armies of the strength of those which fought at Sadova and Gravelotte will take more than four times as much room.

Universal service was 40 years ago the speciality of Prussia, and no other State envied this narrow-minded military Power; since 1866 and 1870 nearly all Powers have hastened to appropriate this secret of victory, and every healthy youth is sent to the colours. Germany and France have respectively 4,750,000 and 5,500,000 men. These numbers are, however, more or less imaginary, and the author depicts at length the inefficiency of the reservist suddenly drawn from private life. The numbers would not be united in a single fight, and the writer describes with some detail how little will be visible to the participant in a modern battle, and how the modern general will command in a roomy house surrounded by telegraphs and other signalling apparatus, with motor-vehicles of all kinds at his disposal. He describes the course of a battle and the arrival of reports of the increasing strength of the enemy, coupled with demands for reinforcements, which the general will not be able to send, not only on account of the distance they would have to go but on account of the lack of room in the firing line.

"The essential task of the leader is fulfilled when, long before the encounter is possible, he has pointed out to all armies and corps the lines of their advance and the points they are expected to reach day by day. The assembling for the combat commences when the men leave the railway.

"As the frontage is greater than formerly the troops will be able to march on fronts at least as great as those which they will occupy in the battle, and the concentration for the battle has lost a good deal of its former importance. Those corps which get into touch with the enemy will not be able to count on being supported. With 144 excellent guns and 25,000 excellent rifles each corps will be able to do at least 10 times as much as in the days of the muzzle loader. If a corps nowadays takes up a front three times as great as 40 years ago it is not splitting up its forces but increasing its strength. With such a front it is well able to attack, to hold what it gains, to meet losses of 50 per cent., and yet to keep a reserve in hand for the final assault on the hostile position. Not, however, that it will be an easy task to advance from cover to cover, to creep up to the enemy's position, to persevere by night and by day, and to be ready at all times to repel a counter-attack."

All armies will not take part in the battle on the first day, and the battle of the future will last for several days, on each of which the commander will demand new sacrifices from those already taking part in it. The author refers to Leipzig, Le Mans, Orleans and Mukden. "These long-drawn fights will be less bloody than those in the past, thus those in the Manchurian campaign cost only 2 or 3 per cent. compared to the 40 and 50 per cent. of the days of Frederick and Napoleon, and the 14 days at Mukden cost the Russians and Japanese less than a few hours at Mars la Tour did the French and Germans.

"The Russo-Japanese war has proved that in spite of all difficulties a mere frontal attack may sometimes succeed, but its results will be only small, and the enemy though he may withdraw will soon offer fresh resistance—and so the war drags on.

Wars of this kind are, however, impossible at a time when the existence of a nation is dependent on the uninterrupted continuation of commerce and industry, and when a rapid decision is imperative in order to permit of trade machinery being again set in motion. Strategy based on wearing out the enemy is out of the question when the existence of millions of men means the expenditure of milliards. To obtain a decisive and annihilating result the front and one or both of the flanks must be attacked, and this is comparatively easy to carry out if one side is much stronger than the other. This marked superiority cannot now be always counted on, and in order to get the numbers for a strong flank attack, those opposed to the front must be reduced as much as possible, but never so much that they can only hold the enemy—it is imperative that the front be attacked. The quick-firing, long-ranging rifle is specially adapted for this purpose, provided the necessary ammunition be forthcoming, and it is better to have ample reserves of ammunition than reserves of men. Cartridges following the army in power-traction vehicles form the best and most reliable reserve, and the troops which formerly were kept in reserve in order to give the decisive stroke must now be moved to the attack of the flank from the very commencement. The stronger the troops available for this purpose the more decisive will it be."

The author lays stress on the importance of previous knowledge of the position of the flank and describes how this reconnaissance—once the work of the cavalry—will in future be carried out by dirigibles and aeroplanes.

"The cavalry will now be free to bring the fire of its long-range carbines, its maxims and its artillery to bear on the rear of the enemy. It will have, however, to meet the hostile cavalry as before, ere it can carry out this duty; thus in the future as in the past artillery will have to fight artillery, cavalry cavalry (and balloons balloons) before they can in combination assist the infantry to win the final victory."

War on the Grand Scale under Present-day Conditions (Der Grosse Krieg der Jetzzeit). By General von Falkenhausen. 280 pp., with maps and appendices. 8vo. Berlin, 1909. Mittler. 9/6.

This is a study of the problems involved in the handling of the enormous armies of the present day. It is based on the following imaginary situation—

"The Blue allied armies of Germany and Austria are opposed to the Red allied armies of France, England and Italy.

"Switzerland, Belgium, Luxembourg, and Holland are neutral. The neutrality of Switzerland is respected by both sides, but that of Belgium, Luxembourg and Holland is violated by the Red forces. Portions of the Red forces, more especially of their navies, are employed in operations outside Europe. French troops on a peace footing have suddenly crossed the frontiers of Germany, Luxembourg and Belgium, and England has landed a force in Holland under cover of an Anglo-French fleet. The German railways on the left bank of the Rhine have been seriously injured at many important points.

"Under these circumstances Germany finds herself obliged to assemble her forces on the right bank of the Rhine and in Southern Germany. Her fleet maintains a waiting attitude in the North Sea and the Baltic. Austria directs the bulk of her forces against Italy, and sends a reinforcement of 6 Army Corps and 2 Cavalry Divisions to the German troops in Southern Germany."

The Blue mobilization takes place during the first half of April, and the assembly of the Blue forces along the Rhine is completed by the 14th April. With the Austrian re-inforcement on their left they then occupy a line about 250 miles in length and number over 1,250,000 men.

The author attaches great importance to the close study of the difficulties involved in the handling of such vast numbers, and is of opinion that this study should not be confined to the higher ranks.

The war, as it affects the German armies and the Austrian reinforcement, is dealt with in three periods, the period of assembly up to the 14th April; the period from the 15th to 20th, during which the simultaneous advance of both sides leads to engagements in which, with one exception, the blue armies are successful; and the concluding period, comprising the retreat of Red to a position behind the Meuse, and the final decisive victory of Blue on the 26th April.

A special chapter is devoted to the events at sea and the land operations dependent on them, but the mistakes made by the commander of the Red navies are so gross and palpable as to be hardly worthy of discussion, and this portion of the work is therefore not so instructive as the rest. The British contingent of 3 Army Corps and 1 Cavalry Division plays an insignificant part. On the defeat of the Red fleets the British Government makes peace on its own account and withdraws its forces, which have hardly fired a shot. Their effect on the operations as a whole has been practically nil, as only second line troops were told off to oppose them.

The reader of a German work of this kind expects to find its subject treated with great thoroughness, and in this case he will not be disappointed. The book has the further great merit that in spite of the large amount of detail to be handled the descriptions and appreciations are very clear and concise.

During the first two periods the course of events is entered into in considerable detail, especially as regards one of the eight Blue armies, the object being to give a clear view of the manner in which the plans and dispositions of the Commander-in-Chief work themselves out in practice. During the final period the operations are described only from the point of view of the Commander-in-Chief, and it is left to students to work out further details for themselves.

As far as possible the movements of Red are dealt with only as they become known to Blue. The last chapter is devoted to questions connected with the lines of communications, supply and transport and finance. The book is accompanied by an excellent series of maps, showing at a glance the position and movements of every army corps, almost from day to day, and by appendices giving similar information in tabular form.

Is Invasion impossible? By Lieutenant Alfred C. Dewar. 57 pp. Svo. London, 1909. Griffin. 1/-.

This small book contains a series of essays on the question of invasion, reprinted from the *Morning Post* and the *United Service Magazine*. The author goes carefully into the questions of transport and disembarkation, and reaches the conclusion that the safeguard against invasion is a strong Navy and National Service.

The Frontiers of France. 1st Volume (Frontières Françaises. Tome premier). By Gustave Vouquin. 102 pp., with 14 maps and 14 engravings. Svo. Paris, 1908. Bibliothèque Larousse. 1/-.

This is the first of three volumes which are to deal with the defences of the French frontiers, and also those of the naval ports of France, Algeria and Tunisia.

There is a preface by that distinguished member of the French Chamber of Deputies, Monsieur Pierre Baudin, in which it is explained that, at the present day, it is absolutely necessary that every Frenchman should have a general knowledge of the defences of his country, and at the same time should understand that no amount of fortification can render a country secure against attack, but, on the contrary, that the only true use of fortifications is as pivots of manoeuvre for the Field Armies. It is with the object of enlightening the French "man in the street" on these points that this series of books is written. The present volume is divided into four parts. The first deals with the defences of the first line on the Northern Frontier, and the second part is concerned with similar defences on the Eastern Frontier, whilst in the third part a general description is given of the second line defences of these two frontiers, and the fourth part is devoted to an account of the Paris entrenched camp. The arrangement of each part is the same. First, the general configuration of the ground in each area is described, then the natural defences, and, finally, the artificial defences.

The volume is, of course, written on very general lines, but should answer its purpose well. The maps in the book are clear, and considerably elucidate the reading of the book.

A Study in Covering Operations (Etude sur la couverture). By Lieut.-Col. G. de Feraudy. 35 pp., with 5 maps. Svo. Paris, 1908. Berger-Levrault. 2/1.

The author considers the organization of covering forces, and how their rôle should be carried out. He illustrates his deductions by considering the Franco-German frontier, which he divides into four sections:—

1. Luxembourg to the Moselle below Metz.
2. The Moselle to the Vosges.
3. The Vosges.
4. Belfort and the Northern Jura.

He then considers the trace of the frontier in the above sections, and its probable influence on the offensive or defensive nature of covering operations; and discusses in detail the organization of, and the means of communication in, each section. He advocates the employment of motor omnibuses for the transport of troops to threatened points, and also the introduction of wire fences to enclose fields with the object of impeding the action of mounted troops.

When Denmark was in distress (Da Danmark var i vaande). By E. Bodenhoff. 51 pp. 12mo. Copenhagen, 1908. Hagerup. 1/-.

This little book is an endeavour to influence public opinion in Denmark in favour of the fortification of Copenhagen on the land side, a question which is now being keenly debated in the Danish Parliament. The author recalls some of the events of the war of 1864, and points out that the Danish reverses were due, in a large measure, to the dissemination of their forces. He urges his countrymen not to repeat this mistake, but to concentrate their strength as far as possible in Zealand. It would not indeed be possible, in his opinion, to defend so extended a front as the whole coast line of Zealand, but it is in their power, he considers, to render the capital safe from a *coup-de-main* by the construction of adequate defences, and thus to secure that the mobilization of the army and navy shall proceed without interruption. For the benefit of those who affect to consider it a matter of indifference whether Denmark retains her independence, or passes under the rule of a foreign Power, he recalls the experience of some of the inhabitants of Schleswig, who, having clamoured to be free from the oppressive yoke of Denmark, found themselves after the war of 1864 subjects of Prussia, and compelled, as such, to serve in her armies through two strenuous campaigns.

The German Navy of to-day is, he remarks, largely manned by the inhabitants of the conquered provinces.

The book concludes with an appeal to all Danes to do their utmost for their country in this critical period.

Field Artillery in co-operation with the other Arms (L'artillerie de campagne en liaison avec les autres armes). By General H. Langlois. In two volumes. 880 pp., with maps and diagrams. Svo. Paris, 1908. Chappelot. 12/-.

In 1892 General Langlois published a work under the above title, which in France was for years looked upon as the standard work on artillery, whilst it enjoyed a very high reputation throughout the Continent of Europe and in Japan.

The views put forward were to a great extent derived from a close study of the campaigns of 1866 and 1870, and their soundness has been demonstrated in a remarkable

way by the events of the wars in South Africa and Manchuria. On this account General Langlois has not thought it necessary to rewrite his book, but has now, in 1908, republished his work of 1892, with certain omissions, some additions, a few explanatory notes, and short appendices dealing with modern weapons.

The work is in two volumes, and is very thorough and complete, with valuable lessons drawn from the wars of 1866 and 1870. The appendices at the end of the second volume are useful, giving short notes on the *materiel* in use by various nations, with an interesting discussion on the future of the pom-pom, in which General Langlois is a great believer: he is of opinion that the present artillery will in time be entirely superseded by guns of smaller calibre, in fact by an improved and enlarged type of pom-pom.

The book opens with an editorial preface reproducing the opinion of the well-known Russian artillerist and author, Colonel Bielaief, to the effect that the Russo-Japanese war has entirely confirmed the views and teaching contained in General Langlois' work of 1892. In spite of this, one cannot help regretting that General Langlois should not have found time to rewrite his book. The work just published is certainly of great value, and it is a striking proof of the ability and technical knowledge of the author, that views and doctrines enunciated by him in 1892 still hold good at the present day.

At the same time, however, it is impossible not to feel that a far more valuable and instructive work would have been evolved had General Langlois given us the additional benefit of his observations and experiences during the last 16 years, illustrated by examples from the wars in South Africa and Manchuria.

The Co-operation of Infantry and Artillery in Battle (*Combinaison des efforts de l'infanterie et de l'artillerie dans le combat*). By Major Niessel. 67 pp. 8vo. Paris, 1908. Lavauzelle. 10d.

This little work, which is based chiefly on the lessons of the Russo-Japanese war, is well arranged and clearly written; the author's views are sound, and the book is worth reading.

Cavalry against Infantry (*Cavalerie contre Infanterie*). By Capt. Marcel Joran. 80 pp., with a map. 8vo. Paris, 1908. Berger-Levrault. 2/-.

The contents of this work hardly bear out the title, and constitute in fact principally a plea for close co-operation between the two arms, and also with artillery. The author is of opinion that the true rôle of cavalry in reconnaissance, and that its opportunities for shock action will be rare. At the same time, he does not believe that modern firearms have rendered charges against infantry impossible, though he asserts that they will rarely be successful, and then only under certain favourable circumstances, i.e., against broken troops, as the result of surprise, etc. His principal aim is to insist on cavalry looking upon reconnaissance and the gaining of information as their chief duty, and not devoting their time and energy to seeking opportunities for charges, which may be of doubtful value or even altogether unnecessary.

The views put forward are generally sound, and the book is interesting and full of apposite examples.

French Infantry Field Service Manual (*Instruction Pratique sur le service de l'Infanterie en Campagne*). Official. 7th Edition. 224 pp. 8vo. Paris, 1908. Lavauzelle.

It is nearly two and a-half years since the last edition of this Manual appeared, and the present edition contains all amendments up to the 15th of September, 1908. These are as follows:-

(1) *Page 9, ninth line of Article 1.*—Convoys now form part of the Army Corps.

(2) *Page 47, second line.*

In enumerating the duties of sentries the previous edition laid down that sentries were not to conceal themselves unless they could do so and at the same-time keep a sharp look out. This paragraph is omitted in the new edition.

(3) *Page 50, line 10 to line 6 on page 51.*

These thirty-two lines are quite new and explain the duties of the portion of the divisional squadron of cavalry attached to the outposts. It is laid down that at the end of the march the cavalry is to remain out covering the outpost position until the infantry pickets are in position, when it is to join the main body of the Division, leaving behind only a few men who will be under the orders of the Officer Commanding outposts.

As a general rule the portion of the Divisional Squadron which is attached to the outposts has to furnish:-

(a) Vedettes to relieve the infantry outposts by day.

(b) Patrols to reconnoitre beyond the outpost line.

(c) A few men to remain with the supports and reserves of the outposts. (These, it is mentioned, may be advantageously replaced or reinforced by cyclists.)

(d) In case of necessity, special posts to occupy bridges or important defiles in front of the outpost line.

(e) *Page 140. End of Article 94.*

In the old edition there was a paragraph at the end of this article to the effect that ammunition was to be issued by the ammunition sections on presentation of a requisition signed by Commanding Officers. This is omitted in the new edition.

Infantry Fire (Infanterie Schiesswesen, Handbuch zum Studium des theoretischen Teiles der Schiessinstruktion und einschlägiger Tagesfragen). By Captain Wilhelm Lechner, Austrian Army. 166 pp., with plates and diagrams. 8vo. Vienna, 1909. Seidel. 3/6.

This book, which has now reached its fifth edition, is a manual of applied musketry. It is intended to teach the individual soldier how to use his rifle under service conditions, and to show the company or section commander how best to direct and control the fire of his men, and how to use his ammunition to the best advantage. The style is clear and simple; mathematics are avoided, and arithmetical demonstrations, where given, are plain enough to be understood by any educated non-commissioned officer.

Part I. deals with the theory of musketry, having special reference to sighting, height of trajectory, and effect of atmospheric conditions.

Part II. deals with the rifle in the hands of the individual soldier, and includes chapters on the error of the rifle, the sheaf of fire, and the probability of hitting. Useful information is given regarding the correction of faults in aiming and in pressing-off. Firing at moving objects and at cavalry is briefly dealt with.

Part III. deals with the collective fire of the company and section. The author explains the reasons which cause the collective error of the company to exceed the individual error of the man, and shows how to apply the resulting sheaf of fire so as to produce the maximum effect. A clear explanation is given of the theory and practice of indirect fire, that is, of firing at an auxiliary mark as so to hit a target invisible from the firing point.

Part IV. includes chapters on a variety of miscellaneous subjects, such as the penetration of bullets, the effect of wounds, and the moral effect of fire. This section concludes with a chapter on the development of the modern rifle, to which is attached a useful table giving details of the various military rifles.

Part V., which comprises nearly half the book, gives a series of 86 practical problems in applied musketry. The following are a few examples:—

Target, a man kneeling in the open at 300 metres. What percentage of hits will a rifeman make on him if he aims (a) at the centre of the ground line, (b) at the centre of the figure?

Target, a mounted man trotting across the line of fire at 500 metres. Where should the soldier aim?

A firing line on a railway embankment 5 metres high is fired on by infantry at 1,000 metres. At what distance behind the embankment will advancing supports come under cover?

An advancing patrol, on reaching point A on the sketch map, is fired upon from hills B and C. The commander returns the fire, ordering elevation 1,400 metres, but cannot observe any result. How should he proceed? Answer, range on the water-meadow between the hills, where the splashes will be visible and correct the fire accordingly.

Modern Weapons. A Guide for Officers of all Arms. Part III.—The Employment and Use of Fire-arms. (Waffenkunde. Ein Führer durch das Waffenwesen der Neuzeit für Offiziere aller Waffen.) By Weiss. Part III. pp. 352-506, with numerous sketches and diagrams in the text. 8vo. Berlin, 1908. Liebelsche Buchhandlung. 3/-.

This volume is the 3rd Part of the series. The author, who is an instructor in the Military Technical Academy, states in the preface that the book is intended as a general guide to the subject of weapons for officers who have not had the advantage of a special technical education.

The book is divided into three parts. Part I. deals with the theory of ballistics, and its application to the solution of problems of gunnery fire-effect and dispersion of fire.

Part II. deals with methods of fire for infantry and artillery, concealed positions, observation of fire and fire against captive balloons. A special section is devoted to the French field artillery.

The book concludes with a chapter on fire tactics, and the methods of employment of each of the various descriptions of fire-arm on the field of battle.

Illustrations of tactical details from the Russo-Japanese War (Taktische Detaildarstellungen aus dem Russisch-japanischen Kriege). Supplement to "Streifzugs Militärische Zeitschrift," Part I. By Colonel V. Habermann and Captain Nowak working under the (Austrian) Chief of the General Staff. 59 pp., with plans and landscape sketch in text, 6 appendices, maps, and photographs. 8vo. Vienna. Seidel. 1/8.

It is explained in a preface to this work, that whereas the monographs of the Russo-Japanese war furnish a general outline of the campaign, and are primarily intended for the study of higher leading, the detailed illustrations supply a want much felt by regimental and departmental officers.

The first portion of the book deals with the night attack of the Russians on the Motien-ling Pass on 4th July, 1904. The description of this operation is admirably clear, and is supplemented by excellent maps and sketches. A criticism follows.

The second portion is devoted to a description of the fighting around Mukden, taken from the diary of the Austrian Captain Franz, who was attached to the 5th Japanese Division. Captain Franz witnessed several infantry attacks from a position immediately in rear of the advancing Japanese troops, and gives a most realistic account of what he saw. The narrative is supplemented by some excellent photographs with a note at the bottom of each to the page in the text which refers to the illustration.

Captain Frans mentions the small effect of artillery fire and the fact that several Japanese soldiers were killed by grenades which they were carrying.

Officers who can read German will find this book of great assistance in bringing home to those under them some lessons of the most recent great war.

Tactical Extracts and Notes from the Russo-Japanese Campaign (Taktische Detaildarstellungen aus dem Russisch-japanischen Kriege). Supplement to "Streifzüge Militärische Zeitschrift"—Part II. Prepared under instructions from the Austrian General Staff. 55 pp., with 4 maps. 8vo. Vienna, 1909. Seidel. 1/10.

These tactical extracts deal with encounters between quite small detachments, with detailed criticism as to the points respectively applicable to all the three arms. The following actions are dealt with:—(1) General Samsonoff's cavalry encounter at Tudsjatur (Wafankou) on the 29th May, 1904, in this section, in addition to the actual cavalry work, some artillery details are very fully touched upon. (2) Infantry engagements near Wafankou (Wafanwopōn) on the 14th and 15th June, 1904. The combatants in this instance were the 1st, 2nd, and 3rd East Siberian Rifle Regiments and parts of the 34th and 15th Japanese regiments. (3) The attack on Sjaosür (Taitsiho) by part of the 47th Japanese Infantry Regiment.

Tactical Lessons from the Russo-Japanese War (Taktische Lehren aus dem Russisch-japanischen Feldkriege). By von Esteroff. 74 pp., with 6 sketches. 8vo. Berlin, 1909. Mittler. 2/—.

The object of this book, as set forth by the author in the preface, is to see how far the experiences drawn from the failures and successes of the combatants in Manchuria are in accord with the teaching of the German training manuals. The method adopted is to give a short account of the chief events of each period of the war, followed by comments in which the mistakes of either side on the field of battle are contrasted with the principles laid down in the German books for the guidance of officers under similar circumstances. The result, in the author's opinion, is to justify the teaching of the German General Staff, and it is remarked that it is a matter of gratification to Germans that the Japanese went into the war trained in accordance with the old German Regulations, though the methods thus learned had, it is true, to be modified in many respects after the experience of the first battles.

The author criticises the Russians chiefly for their want of fire preparation in the attack, the lack of initiative displayed by the subordinate generals, and the intercession in details and the breaking up of units on the part of the higher leadership.

The Japanese are held to have shown want of vigour in pursuit, but are praised for their daring attacks and the offensive spirit which animated their soldiers. The accounts of the battles are illustrated by clear sketch maps showing the positions of corps and principal detachments.

Contact detachments in the Russo-Japanese War (Les détachements de contact dans la guerre Russo-japonaise). By Lieut.-Col. Meunier. 47 pp., with 3 sketch maps. 8vo. Paris, 1908. Berger-Levrault. 1/8.

The author first points out the increased importance, due to modern weapons, of contact detachments, both as covering troops and in order to gain touch with the enemy.

The light thrown upon this subject by the Manchurian War is discussed, and the Japanese movements are followed in detail from the disembarkation at Chemulpo till the end of June, 1904, when the combined advance of the three Japanese armies on Liao-ying commenced, and the rôle of contact detachments, in the opinion of the author, to a great extent ceased.

African Warfare (Guerre d'Afrique. Guide annexe des règlements sur le service en campagne et de manœuvres). By Lieut.-Col. H. J. Frisch. 183 pp. 8vo. Paris, 1908. Lavauzelle. 1/8.

The author of this little book is a well-known writer on military matters connected with North Africa, and has recently been employed as Sub-Chief of the Staff to General d'Amade's Expeditionary Force in Morocco. The book is practically a résumé of certain principles and rules laid down by various distinguished French Generals who have had experience in North African warfare. In the first three chapters there are brief descriptions of Northern Africa and its inhabitants. Then follow three chapters on strategy and tactics as applied to warfare in these regions. The guiding principle laid down is that a very vigorous offensive is absolutely essential, and, by way of showing the effect of a bold attitude on the native mind, an Arab proverb is quoted to the effect that victory is "not so much gained by the number of the enemy killed as by the numbers frightened." The following subjects are also dealt with:—The organisation and command of columns, security on the march and when halted, formations on the march; bivouacs; feeding of the troops; organisation and protection of convoys, water supply, and the rôle of the three arms. In the last chapters of the book there are some interesting remarks regarding fighting on the plains and in the hills.

African Warfare—The Tactics of Large Columns (*La guerre en Afrique. Tactique des grosses colonnes*). French General Staff. 144 pp., and appendices. 8vo. Paris, 1908. Chapelot. 3/-.

This book is published under the direction of the Historical Section of the French staff with the object of showing how a column of 15,000 to 16,000 men operating in North Africa "should protect itself when halted, march and feed itself." Many books have been written regarding the operations of small columns of about 7,000 men, but no book apparently has hitherto dealt with the working of larger bodies of troops in North Africa. To illustrate the latter the campaign of 1859 against the Beni-Snassen tribe has been selected. The campaign was directed by General de Martimprey, an officer of very wide experience in North African warfare. The book opens with a chapter on the causes of the expedition, which is followed by others dealing with the political situation, the preparations for the expedition, and the operations themselves. Perhaps the most important chapter is Chapter V., which enumerates the tactical lessons to be learnt from this expedition, though there is interesting information also in the chapters which deal with the Moorish-Algerian frontier question and with the serious outbreak of cholera which claimed so many victims during the expedition. In the last chapter are given the general conclusions to be drawn from these operations as regards the conduct of this kind of warfare. A theatre of operations, together with plans of various redoubts and posts, and nine sketches, showing the different formations adopted on the march and at the halt.

TRAINING AND EDUCATION.

A Guide to the Study of Tactics (*Leitfaden für den Unterricht in der Taktik*). Official. 158 pp., with diagrams and sketches. 8vo. Berlin, 1909. Mittler. 4/-.

This volume is the 15th edition of a text book on tactics for use in military schools; it is issued under the authority of the Inspector-General of Military Education. The book is in two parts. Part I. is of an elementary nature, and deals with the tactics of the several arms. Part II. deals with the employment of the three arms in combination. The appendix contains some short notes on French and Russian tactical methods.

Tactical Problems for Manœuvres and War Games (*Taktische Aufgaben für Übungen und Kriegsspiel*). By Major Immanuel. 3rd edition, re-written throughout. 431 pp., with 4 maps and 2 sketch maps in pocket. 8vo. Berlin, 1909. Mittler. 10/-.

In this edition the number of problems has been reduced from 225 to 110, and a complete solution of each problem is given. The first 144 pages are devoted to the statement of the problems, the following 287 pages to their solution. The problems are practical and instructive, and the solutions are not merely dry answers, but lucidly reasoned appreciations. The detail given in the answers is throughout in accordance with the latest German official publications. The problems are divided into sections dealing with the following subjects:—Combats; entrenched positions; marches, reconnaissance and screening; cessation of operations; outposts, quarters and supply; minor operations; and guarding a frontier. Each section contains problems in which forces of different strength are employed. Except in the section concerned with minor operations, the forces range from a small mixed force (battalion, battery and squadron) to an army corps.

Ten of the 61 problems in the first section refer to the battle of encounter. In most cases the problem is in duplicate, that is, it has to be solved by both the opposing commanders. Numerous cavalry problems are given, but the artillery are not separately considered. The four large maps which accompany the book are on a scale of about $1\frac{1}{2}$ miles to the inch, and represent districts on the Franco-German and Russo-German frontiers.

The Science of Writing Orders in the Higher Command Staffs (*Die Befehlstechnik bei den höheren Kommandobehörden*). 2nd edition. Anonymous. 92 pp. 8vo. Oldenburg. Gerhard Stalling. 2/-.

This exceedingly useful book on the writing of orders has been written for the use of candidates presenting themselves for examination for the Staff College, and for use in working out tactical schemes, during tactical tours, general staff rides, and war games.

Some useful hints are given as to how to solve tactical schemes, to write an appreciation and to draw up orders.

Examples of orders issued by army, army corps, divisional and cavalry divisional commanders for various situations are given in detail.

A Synthetic Study of the Principal Modern Campaigns (*Etude synthétique des principales campagnes modernes à l'usage des candidats aux différentes écoles militaires*). By Commandant Descoins. 4th edition. 470 pp. 8vo. Paris, 1908. Lavauzelle. 4/-.

The author originally wrote this book for the use of youngsters under instruction at the military school at St. Cyr, but subsequently many officers found it useful for the instruction of regimental sub-officers. Recently it has come into use at the

French Staff College, and so great, indeed, has been the success of the book that a fourth edition has become necessary. The object of the author in writing this book is to teach Military History in accordance with the most up-to-date methods. He remarks that, in the past, students of Military History were required to learn a mass of detail which was of absolutely no use to them, whereas nowadays all teachers of Military History realize that facts are in themselves nothing, but that what is of value to students is that they should grasp the lessons inculcated by any chain of facts. Working on these lines he takes all the campaigns of any importance from 1792 to the Russo-Turkish War of 1877, and after dealing as briefly as possible with the events of these various campaigns, their causes and their consequences, proceeds to point out what lessons are to be learnt from them. In the present edition of the book Commandant Descoings has amplified his comments on the various campaigns dealt with. There are no maps in the book but a note is made inside the cover that an "atlas spécial de croquis" has been prepared by Lieutenant Cavailles to suit the text and is procurable from Lavauzelle, Paris.

Towards Amalgamation (Vers la fusion). By various Authors. 500 pp. Svo. Paris, 1908. Lavauzelle. 4/2.

This volume contains a number of lectures delivered in 1907 and 1908 at the French military college of Saint-Maixent, with a preface by Lieut.-Colonel Lavisse. Commandant of the Collège, Saint-Maixent is the school for non-commissioned officer candidates for infantry commissions, whose status in the French Army it is intended to raise. Colonel Lavisse discusses this question, and urges the advisability of putting Saint-Maixent on the same footing as Saint-Cyr, showing that the best means to produce an equality between the students of the two establishments is to raise the standard of instruction at Saint-Maixent; this he is endeavouring to do, and he certainly has succeeded in obtaining the services of an able set of lecturers. The lectures reproduced in this volume are mostly on military subjects, and some of them are of considerable interest.

The Practical Instruction in Bayonet Fighting (Enseignement pratique de l'escrime à la baïonnette). By Major Niessel and Lieutenant Bar. 50 pp. Svo. Paris, 1908. Lavauzelle. 10d.

A useful little treatise on the art of bayonet fighting, and on its practical instruction.

FORTIFICATION AND MILITARY ENGINEERING.

A Study of the Rôle of Engineers in the Field (Etude sur le rôle du génie en campagne). By Lieut.-Col. Klein. 238 pp., with 6 plates. Paris, 1908. Berger-Levrault. 4/4.

The author of this book disclaims any intention of advocating the use of the defensive. On the contrary he declares that his object in writing is to show how the engineer can help his General by enabling him to occupy a considerable tract of country with a small force, thereby leaving more men available for the offensive. To illustrate his meaning the author takes the first three weeks of the Franco-German War of 1870-71 and, with the object of showing how different things might have been if intelligent use had been made of fortification, describes in detail the general situation of the opposing forces at the commencement of hostilities, the battle of Weissenbourg, the concentration of the French Army, and the battle of Woerth. The last three chapters of the book are devoted to notes on the establishment of pivots of manoeuvre, the preparation of the battlefield, and the utilization of the resources of the engineers.

The writer comes to the conclusion that, in order to enable the engineers to carry out their rôle properly on the battlefield, it is necessary to have (a) an officer in command of the engineers who can at once make up his mind how best to assist in carrying out the plans of the Commander-in-Chief; (b) an Engineer Staff who can recognize what engineer works are necessary to meet any tactical situation; and (c) a specially selected engineer personnel.

The Fortifications of Paris (Les fortifications de Paris). By J. Flourens. 150 pp. Svo. Paris, 1908. Librairie de la Société de recueil J.-B. Sirez et du Journal du Palais. 3/-.

A treatise on the fortifications of Paris, their past history, and future rôle.

AERIAL NAVIGATION.

Aerial Warfare. By R. P. Hearne. 231 pp. Svo. London, 1909. T. Lane. 7/6.

This volume contains a detailed description of all forms of aerial navigation from its inception up to the present time, and gives recorded performances of dirigible balloons and aeroplanes. The author considers that the strides that have been made in aerial navigation during the last few years are so great that it is only reasonable to expect an extraordinary development within the near future. He maintains that the actual use of airships in war, even in their present state, would be very great and that shortly first-class Power, wherever it may be situated, will not be able to do without them.

When a satisfactory pattern of airship has been designed the construction of a fleet of them will not be a costly or lengthy proceeding, but the author holds that unless a staff with practical experience in building and operating vessels is available it will be impossible to construct anything of the sort at short notice.

Mr. Hearne discusses in detail the uses to which airships are likely to be put when introduced into practical warfare and the damage which a small fleet could do with comparatively little risk. He concludes with a strong appeal for the formation of an Aerial Defence League, for which he thinks the time has now come. In the introduction Sir Hiram Maxim gives it as his opinion that eventually airships will stand a very poor chance against aeroplanes, but he fully agrees with the author in considering that flying machines have come to stay and "that measures should be taken to put us abreast with other nations."

The volume has numerous excellent photographs of the various types of vessels and is well worth study, though possibly from a military point of view it might with advantage have been somewhat curtailed.

A Popular Text-book of Aerial Navigation, with special reference to its historical development (Leitfaden der Luftschiffahrt und Flugtechnik in gemeinverständlicher Darstellung und mit besonderer Berücksichtigung der historischen Entwicklung). By Dr. Raimund Nimfuhr. 444 pp., with 221 illustrations. 8vo. Vienna and Leipzig, 1909. Hartleben. 12/-.

This comprehensive and copiously illustrated work begins with a general introduction dealing with the problem of flight.

The body of the work is divided into four parts. The first and second, entitled respectively "Aerostatic flight" and "Aerodynamic flight," deal with the history and development of the various types of balloons and aeroplanes.

The third part is devoted to the theory of flight and deals with subjects such as the resistance of the air, wind pressure, the longitudinal stability of aeroplanes, etc. The last part contains a brief résumé of a literature upon the subject of the aerial navigation.

Instructions for the Service of Military Aerostatics (Instruction pratique sur le service des Aerostats Militaires). Official. Three Vols. of 90, 140 and 132 pp. respectively. 8vo. Paris, 1908. Lavauzelle. 6/-.

These are the latest instructions on Aerostatics issued to the French Army. They are in three volumes and deal in great detail with all matters connected with military ballooning, exclusive of dirigibles and aeroplanes. The first volume deals with the general principles of aerostatics and gives descriptions of all material. The second and third volumes contain chapters on—

- "Manipulations de détail."
- "Manœuvres sans gonflement."
- "Gonflements."
- "Manœuvres avec ballon gonflé."
- "Transports de ballon gonflé"; and
- "Ascensions Libres."

Aeroplanes (Les Aéroplanes). By H. de Graffigny. 140 pp., with numerous illustrations and diagrams. 8vo. Paris, 1908. Tignol. 2/6.

This is a technical work dealing with the history of aerial navigation, and discussing the laws of flight and the construction of flying machines. The illustrations are good, and the book contains a great deal of useful matter.

MEDICAL.

Handbook of the Medical Services of Foreign Armies. Part II.—Germany. General Staff, War Office. 145 pp. and 4 appendices. 12mo. London, 1908. 6d.

Part II. of this series, prepared by Lieut.-Col. W. G. Macpherson, C.M.G., R.A.M.C., deals with Germany and is issued in continuation of the plan recently adopted of publishing descriptions of these services in separate, and therefore more readily revisable parts.

The first portion of the book contains an historical sketch of the development of the medical service of the German Army from early times and mentions the causes which underlay the various phases of its evolution.

It then goes on to describe the medical organization as it now exists in time of peace, dealing with the training, administration, distribution and duties of the personnel, and the sources from which it is derived.

Chapter III. deals with the organization for war, and gives a detailed account of the composition and functions of the various medical units, and describes the medical equipment, field stores and technical transport in use.

The last chapter shows the extent to which voluntary aid to the sick and wounded is organized in Germany, and the preparations made for its employment on mobilization.

The appendices include tables of personnel and equipment, and a vocabulary giving the English equivalents of terms employed in regulations affecting the medical service.

Medical Report on the German Naval Expeditionary Forces in South-West Africa in 1904-05, and in East Africa, 1905-06 (Sanitätsbericht über die Marine-Expeditions-korps in Südwestafrika, 1904-05, und in Ostafrika, 1905-06). Compiled in the Medical Department of the Imperial Naval Bureau. 8vo. 89 pp., with 12 statistical charts and 4 plans as appendices. Berlin, 1908. Mittler. 2/-.

This volume contains two separate reports as above. Both reports are in three parts, the first giving the general conditions, such as formation of the force, equip-

ment, daily life and routine, sanitary measures, health of the force, and medical services with it; the second, general medical statistics and details of the more important diseases; and the third, tables of the statistics of sickness in the different units of the force.

The South West African force had a strength of 39 officers and 648 men. In selecting men those who had a tendency to disease of the feet or skin were rejected. The clothing and equipment, in addition to the normal uniform, consisted of sun helmet, khaki drill, cholera belt, mosquito net, mosquito curtain, neck cloth, two woolen blankets, waterproof sheet, haversack, gauntlets, cooking tin, and a pocket filter for every two men. The marine infantry carried knapsacks, the sailors *ruck-sack*. Some of the men who had light-grey uniforms converted them into khaki by boiling them in a mixture of tobacco and coffee. For underclothing the so-called "Reform" underclothing and "tropical" stockings were added to the ordinary flannel underclothing. High boots, laced boots and canvas shoes were supplied. The East African force had a strength of 402 and was more or less similarly equipped, the gauntlets being noted as of canvas (sailcloth).

In South West Africa the medical personnel was at first 4 medical officers, 12 other ranks of the medical corps, and 24 stretcher bearers, subsequent reinforcements bringing the numbers up to 7 medical officers, 13 other ranks and 24 stretcher bearers. They were distributed to units and to a field hospital. Details of medical and surgical equipment are given in the report, and for hospital purposes three Doecker huts and an army pattern operation tent were taken. Two of the plans show the arrangement of the field hospital.

The greatest difficulties were encountered in the case of food supplies on account of the lack of local resources, the delay and difficulty in bringing up supplies, the distance from the base and the capture of supply columns by the enemy. Officers and men were for days without sufficient food, both as regards quantity and variety. Water was boiled not only for drinking but also for cooking and cleaning the teeth. Tea and coffee were given without stint to induce men to drink only boiled water; and large kettles were used for the purpose. The special mobile water sterilizers (Reitschel-Henneberg's and Kade's) were found to be unsuitable and relegated to the hospitals and lines of communication. For clarifying water, alum and boiling were found the best, and where alum was not to be had then boiling with macaroni or flour balls acted well in hard waters. The men were instructed in means of avoiding tropical diseases, and other sanitary measures of the usual kind are stated to have been taken. The incidence of enteric fever was, however, very great. In one battalion between January, 1904, and April, 1905, there were 185 cases or one-third of the strength; and in the total strength 229 cases or 27·29 per cent. The one-year volunteers suffered most, the admissions being over 42 per cent. and the deaths over 33 per cent. They come of a better social class than the ordinary recruits of the same age, amongst whom the incidence was 33·3 per cent. and the deaths 16·7 per cent. Diarrhoea came next in importance to enteric fever as a cause of inefficiency. The incidence of heart diseases was also exceptional, as many as 170 of the 304 men invalidated home being declared unfit for tropical service on account of affections of the heart. The causes of this are said to be effects of infectious disease, unusual exertions, want of sleep, the high elevations at which operations took place, and insufficient food. Alcoholic causes are excluded, but nicotine poisoning may have had something to do with the incidence of heart affections, smoking being the only solace the men had. The tobacco was strong and men smoked to excess. Amongst other diseases venereal diseases was the most prominent, varying from 49·4 to 183·1 per 1,000 in the different units. The deaths from wounds were 49 (including 47 killed in battle) and from disease 42.

In the East African expedition the medical personnel was 5 medical officers and 13 hospital mates; and the chief difficulties were the lack of animals for transport on account of the prevalence of animal diseases in the district and the necessity of cutting down transport to a minimum. Difficulties with regard to food were not so great as in South-West Africa, and fruit at times was obtainable. Water supply also presented little difficulty. Wells were found almost everywhere. But great difficulty was found in making it fit for drinking. All apparatus brought out for the purpose were useless, and "clarifying with alum and subsequent boiling proved to be the only measures of any real value. They could be applied almost everywhere." The water from streams was clear and only required boiling. Tea coffee, citric acid and a small quantity of rum were issued to add to the water.

The chief disease on this expedition was malaria; the admission rate being 1,373·6 per 1,000 of strength, of which 713·9 per 1,000 were admissions for malaria. The one-year volunteers suffered from malaria most, as many as 1,500·0 per 1,000 admissions occurring amongst them, or more than double the rate of incidence amongst other classes. Mechanical prophylactics were not sufficient to protect against mosquito bites. Quinine prophylaxis delayed attacks with certain exceptions, these exceptions depending on tolerance of the prophylactic from long use, virulence of the infection, and small resistance of the infected individual.

Next in importance to malaria was dysentery, which was of a very severe character, as many as 17 per cent. of the cases dying. Of the total mortality the deaths from wounds or accidents were two in number as compared with seven from disease.

The reports are full of interesting practical points and useful observations regarding expeditions in these two geographical areas. As such they are suitable works of reference in connection with the medical and sanitary requirements of tropical or semi-tropical campaigns.

The Inspection of Meat (De l'inspection des viandes). By A. Carrère, a French veterinary officer. 176 pp. with sketches of meat. Svo. Paris, 1908. Lavauzelle. 2/6.

A carefully written volume, which may prove useful to officers of the Army Service Corps and to orderly officers.

(To be continued.)

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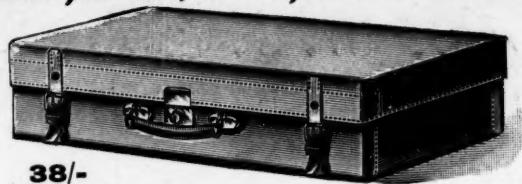
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 " and Bt. Maj. A. J. Turner, Royal Field Artillery.
 " and Bt. Maj. C. B. Thomson, Royal Engineers.
 " and Bt. Maj. A. J. G. Moir, Royal Scots.
 " and Bt. Maj. A. McN. Dykes, Royal Lancaster Regiment.
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